

RAILWAY AGE

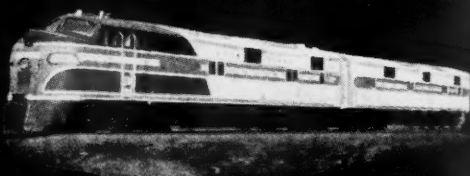
AUG 20 1948

AUGUST 14, 1948

RECORD OF THE ROCKETS

In 1947 the Rock Island's famous fleet of 15 General Motors Diesel-powered Rocket trains piled up a gross revenue of over \$10 million on a total of nearly 3.7 million train miles — an average of \$2.73 per train-mile. Net income of the Rockets was \$5.28 million — over half their gross — after deductions for all direct expenses, interest, depreciation, taxes and insurance.

Equally impressive is the ten-year record of the first two Rockets which were placed in service in 1937. For ten straight years, this pair of profitable dayliners — the Peoria Rocket and the Des Moines Rocket — have averaged a net operating profit per year



exceeding their combined purchase price of \$804,000. Powered from the start by General Motors Diesels, these two trains average

somewhat more than a mile a minute on a combined daily mileage of 1,360 miles.

Such a record is ample evidence of the fact that modern trains pulled by General Motors Diesel locomotives on fast, frequent and dependable schedules are the sure road to profits in passenger service.

ELECTRO-MOTIVE DIVISION

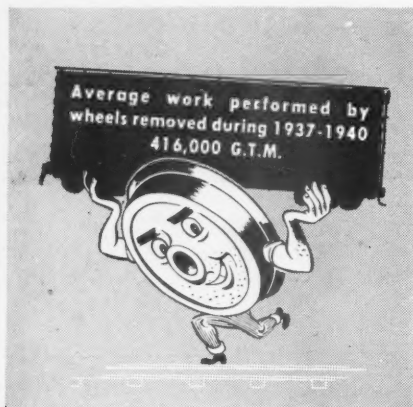
GENERAL MOTORS

LA GRANGE, ILL.

Home of the Diesel locomotive



GENERAL MOTORS
LOCOMOTIVES



Average work performed by
wheels removed during 1937-1940
416,000 G.T.M.

THE TOUGH GUY GIVES

MORE SERVICE TODAY



Average work performed by
wheels removed during 1944-1947
551,000 G.T.M.

That fellow we call The Tough Guy, the Chilled Car Wheel, is even tougher these days than he was a few short years back. Let us mention some statistics that prove it.

Serving under regular railroad freight cars, wheels removed in the four years just past, delivered 32.4% more service than those removed during an earlier four year period. The figures: *average work performed by wheels removed during 1944-1947 was 551,000 Gross Ton Miles as against 416,000 for 1937-1940.*

Behind the statistics is the combined specialized talent and hard work of many people. Among them is the entire AMCCW staff which includes research metallurgists and testing laboratory personnel as well as experienced resident inspectors, traveling inspectors and supervisors. Among them also is a large corps of volunteers from the entire chilled car wheel industry — representatives of member companies who are active and thorough in serving on committees for which their duties and abilities particularly qualify them.



ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS
445 NORTH SACRAMENTO BOULEVARD, CHICAGO 12, ILL.

American Car & Foundry Co. • Canadian Car & Foundry Co. • Griffin Wheel Co.
Marshall Car & Foundry Co. • New York Car Wheel Co. • Pullman-Standard Car Mfg. Co.
Southern Wheel (American Brake Shoe Co.)

6826

RAILWAY AGE

With which are incorporated the Railway Review, the Railway Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office.

IN THIS ISSUE

EDITORIALS

Congress Should Not Delay Its Veto of the "Cement Case" Doctrine	51
A Method of Analysis Not A Complete Answer	52
Astray Freight Absorbs Record Proportion of Revenues	53

GENERAL ARTICLES

The Milwaukee "Hiawathas" for 1948	54
Interesting the Young in Railroading	58
Phosphate—From Train to Ship	60
Passenger Service Develops Apace with Southwest, by Robert G. Lewis	64
Burtress Resigns C. G. W. Presidency	69
New and Improved Products of the Manufacturers	71

GENERAL NEWS	72
REVENUES AND EXPENSES	90
OPERATING REVENUES AND EXPENSES	98
CURRENT PUBLICATIONS	103

Published each Saturday by the Simmons-Boardman Publishing Corporation, Orange, Conn., with Editorial and Executive Offices at 30 Church Street, New York 7, N. Y., and 105 W. Adams Street, Chicago 3, Ill.

Washington 4, D. C.: 1081 National Press Building—Cleveland 13: Terminal Tower—Seattle 1: 1033 Henry Building—San Francisco 4: 300 Montgomery Street, Rooms 805-806—Los Angeles 14: 530 West 6th Street—Dallas 4: 2909 Maple Avenue.

Samuel O. Dunn, Chairman and President. James G. Lyne, Executive Vice-President. C. Miles Burpee, F. C. Koch, R. E. Thayer, H. E. McCandless, S. Wayne Hickey, H. H. Melville, C. W. Merriken, Vice-Presidents. J. T. DeMott, Treasurer. Ralph E. Westerman, Arthur J. McGinnis, Assistant Treasurers.

C. Miles Burpee, Business Manager.

Subscriptions including 52 regular weekly issues, and special daily edi-

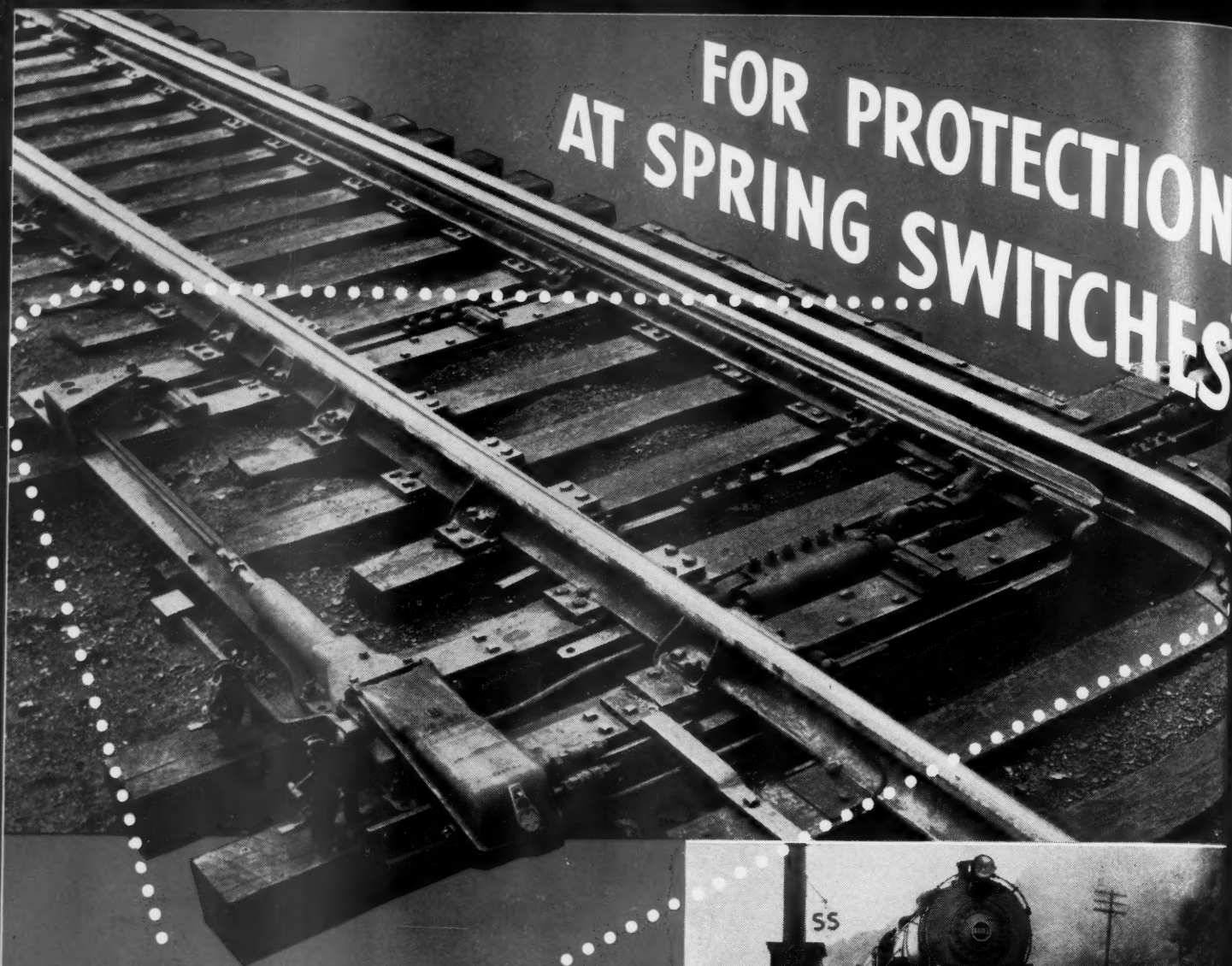
tions published from time to time in New York or in places other than New York, payable in advance and postage free. United States, U. S. possessions and Canada: 1 year, \$6.00; 2 years, \$10.00; other countries not including daily editions: in Western Hemisphere 1 year \$10.00; 2 years \$16.00; other countries 1 year \$15.00; 2 years \$25.00. Single copies, 50 cents each, except special issues.

H. E. McCandless, Circulation Manager, 30 Church Street, New York 7.

Railway Age is a member of Associated Business Papers (A. B. P.) and Audit Bureau of Circulation (A. B. C.) and is indexed by the Industrial Arts Index and by the Engineering Index Service.

PRINTED IN U.S.A.

FOR PROTECTION AT SPRING SWITCHES



install "UNION" *Mechanical* Facing Point *LOCKS*

"Union" Mechanical Facing Point Locks give spring switches a degree of safety comparable to that of interlocked switches . . . make it unnecessary to impose speed restrictions on trains moving over them in the facing-point direction . . . yet, retain all the advantages of the spring switch for trailing moves against the closed point.

For facing-point moves, the mechanism locks the switch points against movement from the impact and vibration caused by a passing train.



For Trailing Moves against the closed point, leading wheels flex the switch points, causing automatic unlock of the mechanism to permit trailing movement. After the train has cleared the switch, points are returned to their normal position and a powerful spring restores the locking plunger in the notch of a standard lock rod.

A built-in *circuit controller* for signal control checks that the switch is correctly positioned and *locked*, and through the *point detector*, continuously checks that the switch points are in the correct position and have not been damaged. Ask our nearest district office for detailed information.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PENNSYLVANIA

NEW YORK
CHICAGO



ST. LOUIS
SAN FRANCISCO

WEEK AT A GLANCE

THE CEMENT CASE DECISION: Lawyers differ as to just what the Supreme Court's decision in the so-called Cement case means to shippers and consumers of commodities that have been marketed under the "basing point" pricing system. Everyone agrees, however, that anything like complete enforcement of the Federal Trade Commission's program for making over the established national economy to conform to its particular ideas of what is right and proper will produce a terrific upheaval of industry and of traffic movements. Whether this will be to the advantage of anyone outside the Washington bureaucracies is doubtful, and its consequences to the railroads can be disastrous.

PERILOUS PROCRASTINATION: Our leading editorial reports the first results of an exploration by *Railway Age* of industry's appraisal of this disquieting development. They are serious enough to call for immediate corrective action. That action can be taken only by Congress. Congress can legalize beyond all doubt the legitimate and wholesome pricing practices under which the American economy has thrived—despite "planners' forebodings—but it isn't likely to initiate such action unless there is a vigorous and well-documented demand for it. No interest is more concerned in getting the basing-point ban upset than are the railroads. The railroads have nothing to gain—and a great deal to lose—by waiting for someone else to do for them what very plainly is necessary for their welfare—even for their preservation. When a tornado threatens, the prudent course is to seek secure shelter, rather than to sit hoping its course will change.

ANTICIPATING THE AUDITORS: Our news pages summarize the findings of the Bender subcommittee which has been looking into the government's wartime freight bill. This report recommends a re-audit of the documents by the General Accounting Office, the result of which, it says, will be a return to the federal treasury by the railroads of \$350 million they are said to have collected in "overcharges." Since the committee already knows just how much the government was "overcharged" it seems strange that it wants a lot of expensive auditors to spend a lot of time getting the figures. (And A.A.R. President Faricy points out that the committee's zeal and insight doesn't extend so far as to embrace wartime *undercharges* to the government in its fulsome calculations.)

NEWEST "HIAWATHAS": For the fifth time since 1935, the Milwaukee recently placed brand new trains on its "Hiawatha" runs between Chicago and the Twin Cities. The 1948 models are described in detail in one of our illustrated articles (page 54). About 40 new cars were required to do this. Built in the railroad's Milwaukee shops, they are part of an order for 127 passenger-train cars placed last year. Roller bearing trucks, Mars safety lights, a "Sky Top" observation lounge with glass panels above as well as

around the passenger, continuous fluorescent lighting along the luggage racks, refined modern air-conditioning, cheerful and harmonious color appointments, and capacious lounge and dining spaces—these are some of the characteristics of the Milwaukee's newest trains. The cars they replace, which are themselves of recent design and manufacture, go into other trains in this carrier's progressive re-equipment program.

FLYING PHOSPHATE: A completely mechanized procedure for loading phosphate rock in ships is in service on the Seaboard Air Line in Tampa. An illustrated article in this issue (page 60) describes the arrangement of synchronized conveyor belts and other facilities which are capable of transferring this commodity from the arriving train to the ship's hold at the rate of 1,500 tons an hour. As many as 90 cars can be unloaded in a continuous operation without the use of a switch engine, and a ship can be loaded without being moved during the process.

EN RAPPORT: The New Haven and a Boston department store have won the hearts of a lot of small boys—and given them a chance to acquire cinders in their ears while getting on friendly terms with locomotives and yards and shops and the inside and outside of trains. They have proved in doing it that the railroad has not lost its lure in this age of "air-mindedness." And it's a good bet that when these youths grow up it will be to the railroads—as well as the New Haven's—advantage to have established this understanding relationship. An illustrated article herein (page 58) outlines the set-up of this Junior Railroaders' Club.

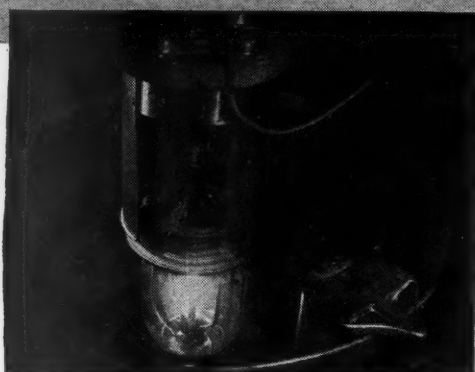
CALLING THE TURN?: Notwithstanding record shipments of coal and a capacity grain movement, freight car loadings aren't up to this period last year or the year before. The generally accurate shippers boards' estimates for this year's first quarter loadings were 6.7 per cent too high. Who was it that said the railroads' estimate of 1948 freight revenues was too low?

"EAGLE" LINE-UP: The growing population of the southwestern states demands the best in the way of train schedules and equipment that the railroads and the locomotive and car builders can create. The Frisco and Katy recently launched streamlined postwar "Texas Specials" between St. Louis and the big Texas cities, and on August 15 the Missouri Pacific and Texas & Pacific are replacing their competing "Sunshine Special" (except the Mexico City section) with completely new "Texas Eagle" trains on faster schedules. The article on page 64 indicates what improvements in service are resulting from these roads' outlay of \$14 million for new equipment, which will make "Eagle" cars available on their other main lines too.

PRE-TESTING AND RE-TESTING — behind every Okonite Cable



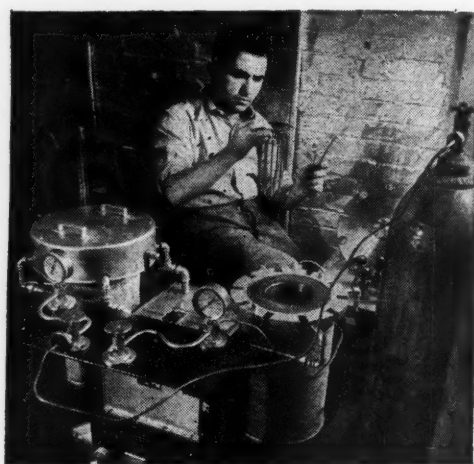
THESE D. C. TESTS FOR IMPERFECTIONS . . . At Okonite regular d. c. tests pick out imperfections in insulated wires and cables not detected by conventional methods. These d. c. tests, at 4 times the a. c. values, are in addition to the routine high voltage tests. "Something extra" is typical of Okonite production techniques and research procedures.



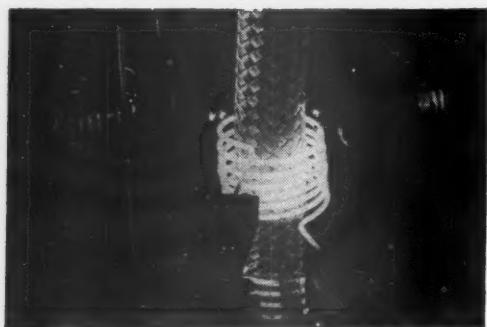
THIS "FOUL WEATHER" FRIEND TO CABLE USERS . . . Every kind of weather but fair is manufactured in Weatherometer used for testing sections of Okonite cable. Repeated cycles of water spray and ultra violet light are combined with freezing in a refrigerator. The result: violently contrasting effects which test cable drastically.



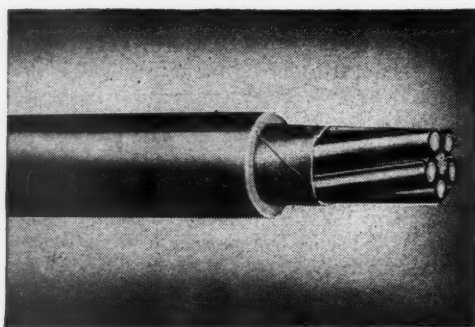
THIS OKONITE "TWIST" ON CABLE TESTING . . . Okonite research includes subjecting short lengths of electrical cable to torsion tests, twisting through a spiral arc of 180° under load. Bending tests, impact tests, tests of wear-resistance by abrasion — these mechanical tests round out a program of electrical, chemical and weather exposure tests.



THIS BOMB THAT DESTROYS GUESSWORK . . . While accelerated aging tests cannot replace the study of actual exposure to weather in proving ground and in the field, they have a definite place in estimating the value of electrical insulation. The oxygen bomb used in these tests is one of many pieces of modern equipment used in Okonite research.



THIS GLOWING TRIBUTE TO CABLE FITNESS . . . Is a cable covering flameproof? Will it resist high temperatures when it comes to actual service? Flame tests in the Okonite laboratories help to answer questions like these long before a cable is manufactured. The measured current that makes the coil glow makes it possible to reproduce test after test without variation.



SUCH TESTS GIVE GUARANTEES of reliable performance in this Okonite-Okoprene signal cable. Other places where Okonite research benefits railroad men is in the manufacture of C. T. C. wires and cables, communication cables, jumpers and track wire, case and instrument wiring, car and shop wiring, battery cables, power circuits, portable cords. The Okonite Company, Passaic, N. J.

6007

OKONITE



insulated wires and cables

RAILWAY AGE

EDITORS...

Samuel O. Dunn and James G. Lyne

MANAGING EDITOR...

C. B. Tavenner

WESTERN EDITOR...

Neal D. Howard

WASHINGTON OFFICE...

Walter J. Taft
Sherman Davis

TRANSPORTATION DEPARTMENT...

William H. Schmidt, Jr.
Robert G. Lewis

MECHANICAL DEPARTMENT...

C. B. Peck
E. L. Woodward
H. C. Wilcox
C. L. Combes
G. J. Weihofen

ENGINEERING DEPARTMENT...

M. H. Dick
Walter L. Turner, Jr.
Henry E. Michael
Norris V. Engman

PURCHASES & STORES DEPARTMENT...

John W. Milliken

EQUIPMENT & FINANCIAL NEWS...

Fred C. Miles

SIGNALING AND COMMUNICATIONS DEPARTMENT...

John H. Dunn
Maurice Peacock

ELECTRICAL DEPARTMENT...

Alfred G. Oehler

WESTERN NEWS DEPARTMENT...

George R. Johnson

ASSOCIATE EDITOR...

Charles Layng

LIBRARIAN...

Edith C. Stone

EDITORIAL ASSISTANT...

Elaine C. Farrar

CONGRESS SHOULD NOT DELAY ITS VETO OF THE "CEMENT CASE" DOCTRINE

This paper recently sent to a cross-section of the nation's important shippers of freight a questionnaire to ascertain their opinions on the economic effects of a strict application of the Supreme Court's ruling in the so-called "Cement Case"—with particular regard to what it may do (1) to the demand for railroad transportation and (2) to the price of goods to ultimate consumers.

Replies to this questionnaire are still being received and no definitive classification and tabulation of them can yet be made. It is evident, however, that shipper opinion is almost unanimous in the belief that, if strictly and generally applied, the quotation of all prices f.o.b. at the point of production will destroy a great deal of the traffic which now moves by rail. The overwhelming majority of those replying to the questionnaire also believe that prohibition of all absorption of freight charges by shippers will have the result of increasing substantially the prices of goods to ultimate consumers.

Now Is the Time to Act

On the strength of such opinion from informed sources, railroad managements would be negligent of their duty—alike to their employers and to the consuming public—if they should refrain from engaging, forthwith, in an intensive effort (1) to ascertain from shippers and consignees as many

specific instances as possible of harm to ultimate consumers which prohibition of absorption of charges by shippers will occasion; (2) to make these facts widely known to every person whose interests are going to be adversely affected; and (3) to cooperate in every legitimate way with all concerned to induce Congress to act with all possible speed to legalize wholesome and traditional pricing practices which the New Dealers of the Federal Trade Commission and Supreme Court have prohibited.

There can be no excuse for procrastination or fence-sitting on this issue, because the damage inherent in prohibiting absorption of freight charges is already occurring, even though there seems to be some reason to doubt whether the Supreme Court in its decision actually meant to go as far as the Federal Trade Commission believes it did. The point is that absorption of freight charges by the shipper *may* be illegal, and producers who do not wish to run the risk of incurring heavy penalties must act *as if* all but "mill net" pricing violates the law.

It is encouraging news that Senator Capehart is looking into this situation, with the thought of proposing remedial legislation if, in due course, after time-consuming research, the facts are discovered by Congress to be what, probably, nine out of every ten shippers already know them to

be. That is, that prohibition of freight-charge-absorption is going (1) to give many producers monopolies in areas immediately surrounding their plants while the government pretends to be waging a war to destroy monopolies; (2) to cut off many producers from a large part of their traditional markets, bringing lay-offs, shut-downs and destruction of capital investment; (3) to deprive many consumers of their customary and dependable sources of supply, at a time when serious shortages of many products are already problem enough for them; (4) on the average, to increase considerably the cost of goods to ultimate consumers; (5) arbitrarily to deprive the transportation industries, especially the railroads, of business to which they have a legitimate economic claim; and (6) in general, to bring about localization of production and consumption—in defiance of experience which has proved that nationwide markets, with each area specializing in the production of goods to which it is best adapted by nature, bring an increase in general well-being. At the very time when this nation is trying to persuade the European countries to lower the barriers that hamper interregional trade and commerce, the relics of the New Deal on the bench and in administrative office are endeavoring to regionalize commerce here at home.

An Illogical Approach

The competent researchers named by Senator Capehart will, no doubt, after extended inquiry and deliberation, recommend legislation designed to arrest this destructive course which the Federal Trade Commission has prescribed and the Supreme Court has refused to halt. In the intervening period, however—which may be a year or more—the destruction will go on. Many companies will not be able to wait upon the outcome, but will revise their marketing and purchasing methods to conform to the new edict. To the extent that acceptance of pricing on an exclusively f.o.b. basis involves capital expenditures in localized facilities of production, those companies which accommodate themselves to the change will acquire a vested interest in maintaining it.

For Congress not to provide legislative relief until it hears from its researchers on this question is equivalent to putting the burden of proof on the defenders of this country's traditional way of doing business—giving the benefit of the doubt to the New Deal bureaucrats and judges who are gaily shooting craps with billions of dollars of other people's money. This is an illogical approach—the burden of proof should be on the innovators. There is enough *prima facie* evidence to justify Congress in passing legislation to legalize absorption of freight charges by shippers for a period of a year—until its researchers have time to bring in their report. If

strict prohibition of anything but f.o.b. pricing should by any chance be found desirable, no great damage could be done by delaying it for a year. On the other hand, if this prohibition is as contrary to the public interest as practically all competent opinion believes it to be, then its continuance even for a year ought not to be tolerated.

The railroads have every reason to assume leadership in a move to call upon Congress for immediate remedial action—because they stand to lose, not only as consumers, like everyone else, from the doctrine laid down in this case, but they are beyond question going to be deprived of a large volume of their traffic if this ruling is not vetoed. The suggestion has been made that the shippers advisory boards be asked to sound out their members on this issue, and this idea certainly is worth some thought and discussion.

A METHOD OF ANALYSIS NOT A COMPLETE ANSWER

In the article on page 35 of last week's *Railway Age* Colonel N. B. Ballantine presented a challenging analysis of the possibilities for saving in the cost of fuel and fuel transportation by the complete conversion of the railways of the United States from operation by steam motive power, coal and oil-fired, to operation by Diesel motive power. The savings are based on operating statistics and fuel prices as reported by the Interstate Commerce Commission for the Class I railways for March, 1948. During this month active steam locomotives in road freight service averaged 97.7 miles and Diesels 220.1 miles per day.

In his analysis Mr. Ballantine estimates a division of freight locomotive-miles between through trains and way-freight and branch-line trains of 65 per cent and 35 per cent, respectively. He assumes that in through-freight service Diesel locomotives, handling all assignments, will average the 200.1 miles per day which are now being made by all Diesel locomotives in freight service. Considering the fact that Diesel locomotives, in March, moved only about 19 per cent of the gross ton-miles and are now generally employed where the opportunities for high monthly mileages are the most promising, it seems improbable that with complete Dieselization such an average daily mileage could be attained in that service. The same doubt also applies to the attainment of an average of 450 miles per day in through passenger service with complete Dieselization, when in March Diesels averaged 475 miles a day, handling only 38 per cent of the total passenger car-miles.

Mr. Ballantine's estimates compare the March average of 97.7 miles per locomotive per day in all road-freight service with a prospective mileage of 154.6 were all road-freight service performed by Diesels, an increase of 58 per cent. In passenger service the comparison is between an average of 167.1 miles per steam locomotive per day with 232 miles per Diesel locomotive per day, an increase for the Diesels of 39 per cent.

With the same attention to keeping steam locomotives on the road which is given to the Diesels, steam locomotives, with good coal, have approached 90 per cent of the mileage attained by Diesels in comparable service. That Diesels, in the long run, will better by more than 15 to 20 per cent the steam utilization which is possible of attainment seems improbable.

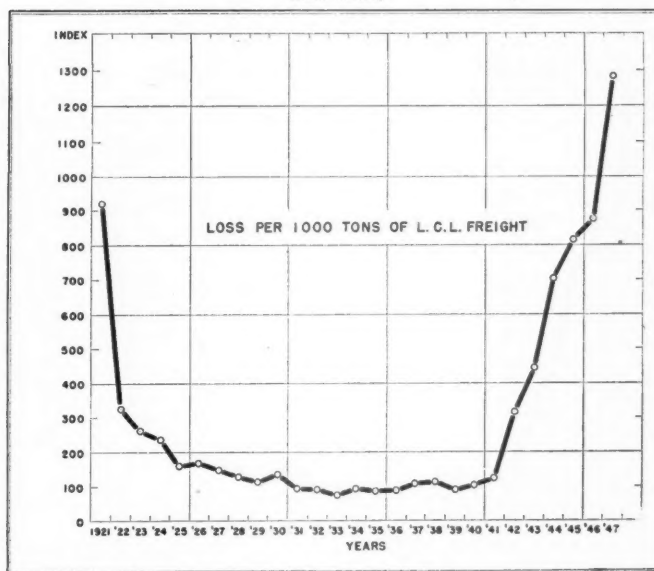
In considering the problem of a complete change of motive power on all the railroads of the United States, the answer cannot be attained completely by an analysis based on general averages. The conditions which determine the action to be taken are those on a large number of individual railroads, none of which exactly fits the general averages. Mr. Ballantine's analysis presents a method by which each railroad, guided by its own studies of the possibilities of Diesel utilization under its own traffic conditions, may arrive at its own conclusions. A convincing answer can be attained only after the survey has included the possibilities for improvement in the conditions affecting the utilization of steam locomotives, many of which can be made with relatively little capital expenditure, and by a steam-locomotive rehabilitation program.

ASTRAY FREIGHT ABSORBS RECORD PROPORTION OF REVENUES

Almost 1½ per cent of all revenue received for the transportation of l.c.l. freight during the year 1947 was paid back to shippers—unhappy shippers—for but one type of claim, "Unlocated Loss of Entire Package."

Perhaps in the intensive effort to beat the loss and damage problem as a whole, the importance of this single contributing cause has been minimized. If this be so, a glance at the accompanying chart should redirect attention to this factor. Money paid out during 1946 for unlocated loss of entire packages amounted to \$232.54 per 1,000 tons of l.c.l. freight originated. In 1947, this figure rose 46 per cent to \$339.55 per 1,000 tons, and surpassed, for the first time and by a wide margin, the 1921 record of \$243.69. The chart shows that if the five-year period 1935 to 1939 is used as a base (index 100), the 1946 index is 880 and the 1947 index 1285!

INDEX OF UNLOCATED LOSS OF ENTIRE PACKAGE (L.C.L.) PER 1000 TONS OF L.C.L. FREIGHT ORIGINATED
(1935-39=100)



Goods shipped by l.c.l. freight are higher in price than they used to be—and part of the rise in claims comes from this cause rather than from the increase in the number of shipments lost. The fact that freight is worth more is good cause for intensified efforts to reduce its wrong handling.

The means to reduce this extravagant loss are largely within the carriers' hands. Incomplete or erroneous marking is responsible for a large part of it. The railroad has the opportunity to refuse improperly marked freight—once when it is picked up, and again at the receiving platform. Some freight is signed for that is never received at all. A great deal of freight is allowed to go forward before it is matched with its billing, and is delivered at destination without positive proof of ownership. The Prevention Manual Digest published by the Freight Claim division of the Association of American Railroads sets forth rules and practices regarding prevention of loss of entire packages—and procedures to govern in such cases which, if followed scrupulously, should go a long, long way toward plugging this wasteful leak in revenues. Adequate enforcement may require additional supervision.

PROGRESS TOWARD INDUSTRIAL PEACE

When will we learn the wisdom of Pope's admonition that "The proper study of mankind is man?" I think we ARE learning. Turning from irony to hope, it seems to me that the brightest star on the industrial horizon is the rise of education and practice in human relations. This is a matter both of philosophy and techniques applied at the places where people work. Through the years, slowly, haltingly, and after many failures, we are evolving a code. Experience is giving us a body of techniques and, better still, a set of tested principles. Call it human engineering, industrial relations, personnel management, or what you will, it is a code and it IS growing.

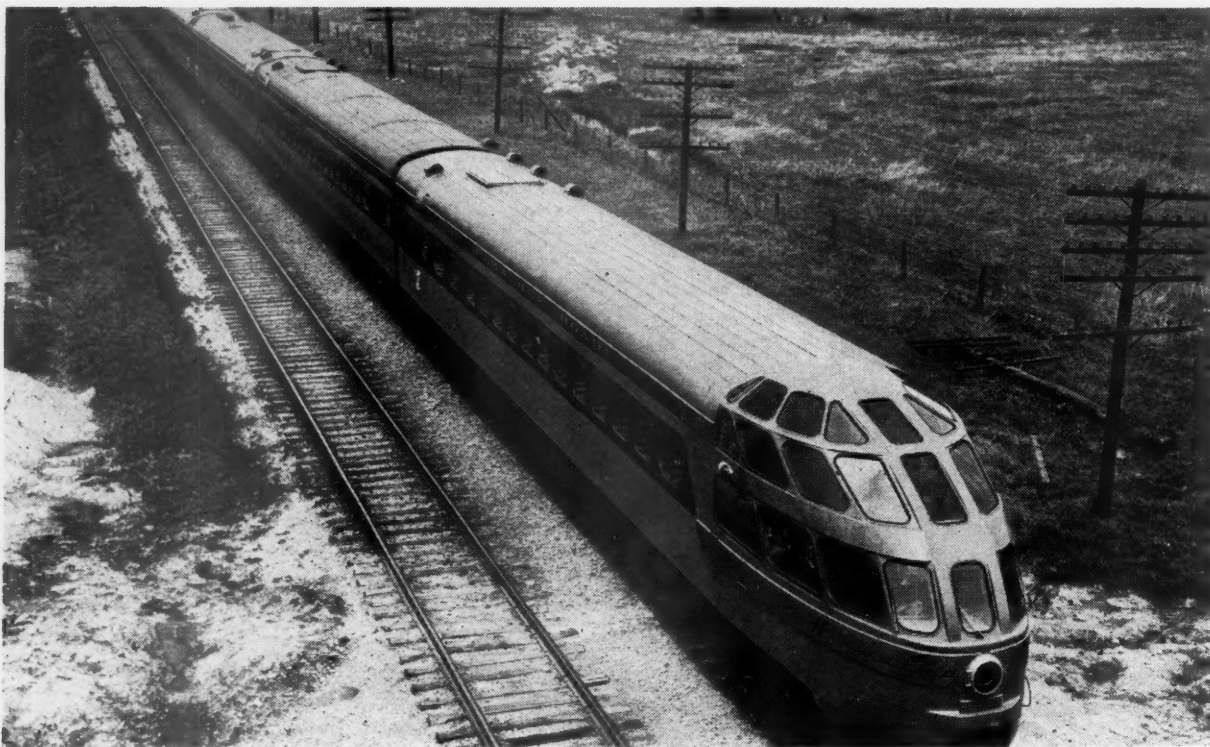
—Clarence Francis, chairman of General Foods Corporation



Left—One of the new "Hiawatha" trains from the head end. Right—The Sky Top observation lounge from inside

THE MILWAUKEE "HIAWATHAS" FOR 1948

Forty cars, built at Milwaukee shops, which completely re-equip the Chicago-Twin Cities "Hiawathas," are part of the C.M.St.P.&P. passenger-car improvement program



One of the new "Hiawatha" trains from the rear

As announced in a recent issue of *Railway Age*, the Chicago, Milwaukee, St. Paul & Pacific has installed complete new locomotive and car equipment on its four daytime streamliners operating between Chicago, Milwaukee, Wis., St. Paul, Minn., and Minneapolis. This equipment includes four General Motors 4,000-hp. Diesel-electric locomotives and approximately 40 cars, the latter built at Milwaukee shops. Inaugural runs with the new trains were made on May 29, the thirteenth anniversary of "Hiawatha" service.

The new cars are part of total order for 127 passenger-train cars, including 41 head-end cars of various types, two business cars and two Diesel motor cars, placed with Milwaukee shops in 1947. Of the 86 passenger-carrying cars, 47 are equipped with Waukesha air-conditioning and 39 with Safety steam-jet air-conditioning units.

Three of the "Hiawatha" trains operate on a schedule that calls for a run of 410 miles in 375 minutes, making seven station stops. The fourth, the westbound morning "Hiawatha," operates on a slower schedule because it carries mail and makes additional stops.

The consist of each train varies from 10 to 16 cars, including a baggage car with office quarters for the conductor, day coaches with reclining seats equipped with adjustable foot rests and spacious lounge and smoking rooms, buffet-lounge cars called Tip Top Taps for the service of light refreshments, dining cars that seat 48 and have stainless steel kitchens with deep-freeze units and all modern devices for storage and preparation of food under sanitary conditions, reserved seat parlor cars that include drawing rooms, and an observation parlor car with Sky Top lounge the 90 per cent transparent-area roof of which forms the streamline end of the train. All cars are air conditioned and equipped with public-address system and radio.

As an added safety feature, Mars lights, built into the observation car ends, flash oscillating red beams as a warning to other trains when the "Hiawatha" is halting for unscheduled stops or its speed is greatly reduced. These lights on observation rear ends are also used in back-up train movements.

Improved roller-bearing trucks, of Milwaukee design, contribute to smoother riding at all speeds. Air brakes are of the Westinghouse high-speed-control type, incorporating the electric feature.

The exterior color scheme is bright and attractive, utilizing traditional Milwaukee colors of orange and maroon accented by a restrained touch of stainless steel and modern script lettering of the name "Hiawatha."

Features of the Car Construction

The new cars constitute the fifth re-equipment of "Hiawatha" trains since 1935 and make possible improved service over the entire road, since replaced cars will be thoroughly reconditioned and used in less important trains in other parts of the system.

The structural design of the new "Hiawatha" cars combines several important factors, namely: structural strength with minimum weight to create a car meeting

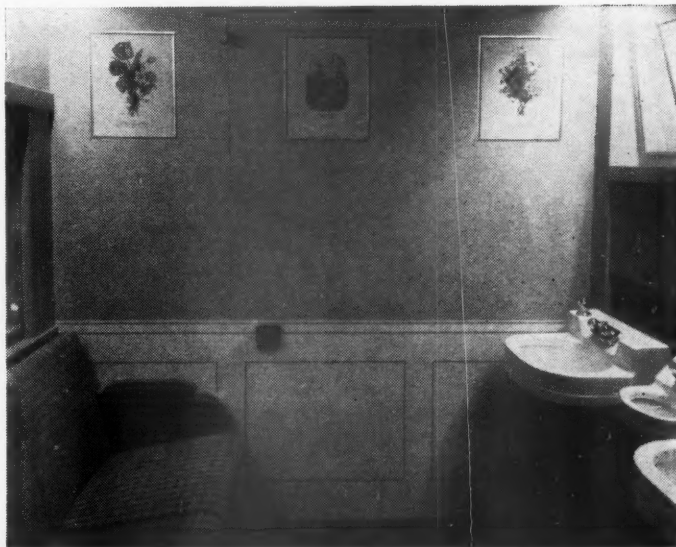


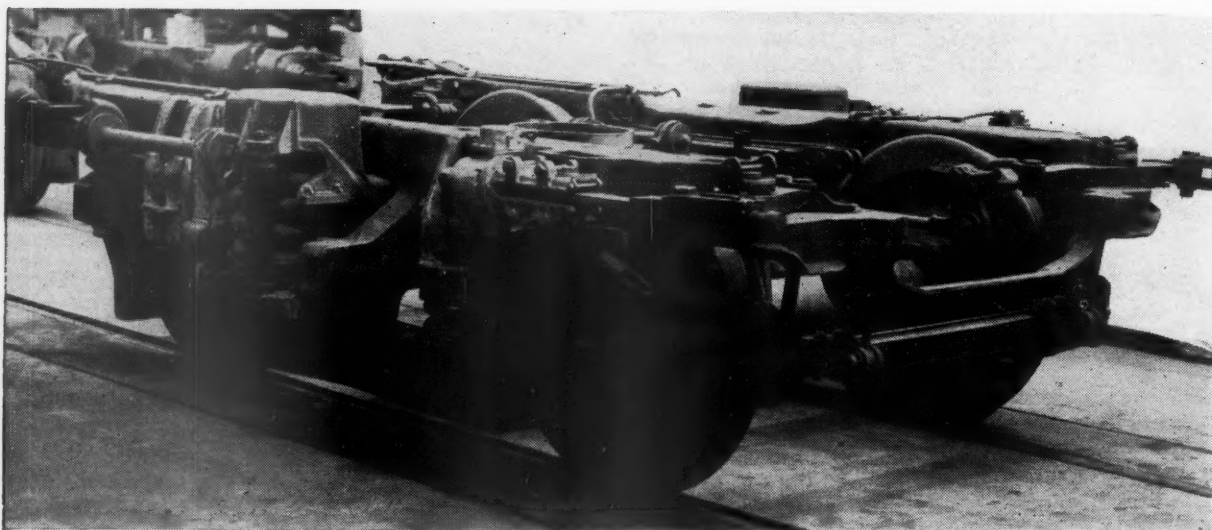
The dining car



Parlor-car seats are adjustable

The women's lounge room in a 1948 "Hiawatha" coach





The four-wheel truck installed on the new cars

all present-day requirements as to tests and design specifications; simplicity in design for ease of fabrication, assembly and maintenance in coach yards; and balance, to give maximum stability and riding comfort at all speeds.

Heating equipment includes Vapor Zone heat with copper-fin radiation along the side wall and an overhead coil to heat all fresh and recirculated air. Air-conditioning consists of Waukesha mechanical and Safety steam jet. The steam-jet air-conditioning unit used on all cars built in 1946 and 1947 is completely new in its assembly and application to these cars, but the basic design of the component parts and their functions has been retained. Milwaukee engineers, drawing on extensive experience in the operation, servicing and maintenance of this type of equipment and working in collaboration with the Safety Car Heating & Lighting Co., have created an entirely new arrangement for this particular unit which is mounted inside the car body and comprises a steam-jet unit said to surpass any of the older conventional units both in economy of operation and convenience for "on the train" servicing.

The primary lighting in all passenger-carrying cars is fluorescent, with incandescent emergency lights. Power for the fluorescent lights is furnished from a motor alternator installed on the car and power for emergency lighting is supplied directly from the batteries. An unusual feature in the body of the coaches and parlor cars is the development of the continuous fluorescent lighting along the front edge of the luggage rack; the extruded aluminum fixture was developed by Milwaukee engineers and fabricated and assembled ready for application by the Moynahan Bronze Company, Detroit, Mich.

Seats in the body of the coaches are the Heywood-Wakefield Sleepy Hollow type. Chairs and sofas in lounge rooms were designed and built at Milwaukee shops; dining-car chairs were designed by Milwaukee engineers and the frames were built of magnesium.

All lounge rooms are equipped with two porcelain

washstands and one dental bowl arranged in a compact unit with towels, paper cups and convenience outlet for electric razors.

The four-wheel cast-steel high-speed trucks were designed by Milwaukee engineers and assembled at the Milwaukee shops. The design of these trucks is based on results obtained from many tests conducted by the Milwaukee over a period of several years. This truck design eliminates the conventional equalizers and pedestals, the conventional spring suspension, and the conventional swing hangers. It introduces a rubber sandwich to control lateral motion between the wheels and truck frame.

Decorative Treatment

In contrast to the "Olympian Hiawatha" trains, completed about a year ago, the treatment of the exterior paint scheme of the new "Hiawatha" cars retains the continuous horizontal bands of maroon color through the letterboard area and the window area, terminating in an angular panel at the new Sky Top lounge car, with the single note of family resemblance to the "Olympian Hiawatha" scheme. These individualized treatments, though harmonious, and in a similar trend, give complete individuality and identity to the two well-known trains.

The new "Hiawatha" coaches carry out cheerful interior color schemes in two alternating designs, using laminated plastic paneling for maintenance and beauty, coupled with the warmth of bleached walnut wood. The designer has produced practical interior wall treatments designed to look well for many years. Harmonizing walnut bulkheads are diagonally accented with the emblem of the "Hiawatha" Indian trademark, finished in gold lacquer, to pick up the continuity of the exterior vestibule emblem.

The reclining coach seats are treated with two-tone upholstery in chocolate brown and chartreuse yellow in one car treatment, and a cool green and gray in the other. Windows are arranged for most

beneficial vision, without exposing the passenger to cold glass against his outside arm. Air-conditioning is handled through a perforated center ceiling panel over the center aisle.

The lunch-lounge car is designed with its forward half arranged for serving sandwiches, soft drinks, and light meals, the galley and bar amidships, and the regulation lounge area in the rear half of the car. Diagonal seating and restaurant type booths are featured in the snack-room area, whereas cocktail lounge seating is employed in the lounge area.

In the 48-seat diner, the long, narrow effect of the car body has been softened by a break in the wall treatment of the central section featuring a three-dimensional offset in the paneling, terminating in an indirect lighting trough in the ceiling. This central portion of the car features laminated plastic with gray-green background, relieved by a diagonal diamond leaf pattern of hawthorn leaves and flowers. This treatment breaks visual monotony and suggests three smaller rooms. A gray block pattern is used on the chairs in the central area, whereas a gray-green block-pattern fabric is used on the chairs in both of the end portions of the car.

The new parlor cars afford more seats than former models, with equally comfortably spaced centers. The seats are of special design, created for this train. Soft gray-green laminated plastic is used on the walls, augmented by the blond walnut trim.

The Sky Top solar lounge has been carefully designed to retain impact strength and yet offer the maximum visibility for the scenic views of the beautiful trip to and from the Twin Cities. On clear nights, the lighting can be arranged on the interior for full view of the moon and stars. The glass used in this area is special heat-and-glare resistant Herculite exterior panes and Duolite interior panes.

Partial List of Materials and Equipment on 1948 "Hiawathas"

Sheet steel, perforated	W. Toepfer & Sons, Milwaukee, Wis.
Pipe fittings and pipe	Chase Brass & Copper Co., Waterbury, Conn.
	Crane Sales Company, Chicago
	Meriam Co., Cleveland, Ohio
	Mueller Brass Co., Port Huron, Mich.
Rubber goods	U. S. Rubber Company, New York
Aluminum sheets and extrusions	Aluminum Company of America, Pittsburgh, Pa.
Aluminum extrusions	Moynahan Bronze Co., Detroit, Mich.
Rivets	Chicago Steel Service Company, Chicago
Welding rod	A. O. Smith Corp., Buffalo, N. Y.
Sheet and structural steel	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
	Great Lakes Steel Co., Detroit, Mich.
	Joseph T. Ryerson Co., Chicago
Grating material	Blaw-Knox Company, Pittsburgh, Pa.
Steel tubing	Globe Steel Tubes Co., Milwaukee, Wis.
Axles	Standard Forging Co., Chicago
	Standard Steel Works, Div. of Baldwin Locomotive Works, Burnham, Pa.
Air-brake equipment	Westinghouse Air Brake Co., Wilmerding, Pa.
Clasp brakes	American Steel Foundries, Chicago
Couplers and yokes	Buckeye Steel Castings Co., Columbus, Ohio
Draft gear, buffers and hand brakes	W. H. Miner Co., Chicago
Roller bearings	Timken Roller Bearing Co., Canton, O.
Shock absorbers	Houdt Engineering Div. of Houdaille-Hershey Corp., Buffalo, N. Y.
	Monroe Auto Equipment Co., Monroe, Mich.
Spline bushings	Hyatt Bearings Div., General Motors Corp., Harrison, N. J.
Springs	Railway Steel Spring Div., American Locomotive Co., Schenectady, N. Y.
Truck and platform castings	General Steel Castings Co., Eddystone, Pa.

Wheels	American Rolling Mill Co., Chicago
	Bethlehem Steel Company, Bethlehem, Pa.
	Edgewater Steel Co., Pittsburgh, Pa.
Insulation	Gustin Bacon Manufacturing Co., Kansas City, Mo.
	Johns-Manville Corp., New York
	U. S. Gypsum Company, Chicago
Sealing compounds	Iresstite Engineering Co., St. Louis, Mo.
Weatherstripping	Morton Manufacturing Co., Chicago
	R. W. Preikschat Company, Chicago
Electrical equipment	Allen-Pradley Co., Milwaukee, Wis.
	General Electric Co., Schenectady, N. Y.
	Graybar Electric Co., New York
	McGraw Electric Co., Chicago
	Pyle-National Co., Chicago
	Westinghouse Electric Corp., East Pittsburgh, Pa.
Storage batteries	Electric Battery Company, Philadelphia, Pa.
	Gould Storage Battery Corp., Depew, N. Y.
Air conditioning	Waukesha Motor Company, Waukesha, Wis.
Air-conditioning equipment	Safety Car Heating & Lighting Co., New York
Air-conditioning specialties	Trane Company, La Crosse, Wis.
Air filters	Air Filter Corporation, Milwaukee, Wis.
	Air Products, Inc., Allentown, Pa.
Air-intake hood	Farr Company, Los Angeles, Calif.
Generators	Safety Car Heating & Lighting Co., New York
Generators, engine-driven	Waukesha Motor Company, Waukesha, Wis.
Heating equipment	Vapor Car Heating Company, Chicago
Heating specialties	Trane Company, La Crosse, Wis.
Steam-pipe covering	Union Asbestos & Rubber Co., Chicago
Light fixtures	Luminator, Inc., Chicago
	Pyle-National Co., Chicago
Radio and public address system	Radio Corp. of America, New York
Paint	J. W. Mortell Company, Kankakee, Ill.
	Pittsburgh Paint Company, Pittsburgh, Pa.
Veneer	R. S. Bacon Veneer Company, Chicago
Decalcomanias	Meyercord Company, Chicago
Wallpaper	T. C. Esser Company, Milwaukee, Wis.
Glass	Pittsburgh Plate Glass Company, Pittsburgh, Pa.
Mirrors	T. C. Esser Company, Milwaukee, Wis.
	Pittsburgh Plate Glass Company, Pittsburgh, Pa.
Shades	Railway Curtain Company, Chicago
Chairs	General Fireproofing Company, Youngstown, Ohio
Bed springs	Nachman Corporation, Chicago
Mattresses	Beck-Blatchford Company, Chicago
Sofa beds	Simmons Company, New York
Seats:	
Coach	Heywood Wakefield Company, Gardner, Mass.
Parlor car	Coach & Car Equipment Co., Chicago
Upholstery:	
Fabrics	Goodall Fabrics Inc., New York
Materials	Constant Hopkins Company, Chicago
Leather specialties	Ashtabula Hide & Leather Co., Ashtabula, Ohio
Formica	Formica Insulation Co., Cincinnati, Ohio
Plastic manufactures	Rohm & Haas Co., Philadelphia, Pa.
Ash trays	Climax Machinery Co., Indianapolis, Ind.
Floor, non-skid	American Abrasive Company, Westfield, Mass.
Rugs	Olson Rug Company, Chicago
Linoleum	Armstrong Cork Company, Lancaster, Pa.
Air and water tanks	Pressed Steel Tank Co., Milwaukee, Wis.
Coffee makers	Cory Corp., Chicago
Coffee urns	Stearnes Company, Chicago
	Zees Coffee Urn Company, Chicago
Electric dishwashers	G. S. Blakeslee & Co., Cicero, Ill.
Food mixers	Hamilton Beach Company, Racine, Wis.
Mail-car water coolers	E. A. Lundy Co., New York
Vegetable steamers	Angelo Colonna, Philadelphia, Pa.
Hoppers	Crane Sales Company, Chicago
	Dayton Manufacturing Co., Dayton, Ohio
	Duner Company, Chicago
Washstands	Adams & Westlake Co., Elkhart, Ind.
	Crane Sales Company, Chicago
	Dayton Manufacturing Co., Dayton, Ohio
Dental bowls	Crane Sales Company, Chicago
Paper cups	Dixie Cup Company, Chicago
Vending machines in lounges	Hospital Specialty Co., Cleveland, Ohio
Hardware	Loeffelholz Co., Milwaukee, Wis.
Door hangers	Midland Company, Milwaukee, Wis.
Windshield wipers	Charles A. Sprague Devices Co., Michigan City, Ind.
Quick label code cards	W. H. Brady Company, Milwaukee, Wis.
Signal lamps	Mars Signal Light Company, Chicago
Fire extinguishers	Adams Crerar & Co., Chicago

INTERESTING THE YOUNG IN RAILROADING

JUNIOR RAILROADERS' CREED

"I promise to support the aims, ideals and activities of the Junior Railroaders Club to the best of my ability. Furthermore, I promise to conduct myself in a responsible manner and at all times respect the properties of the New Haven Railroad and Wm. Filene's Sons Company."

I am aware that violation of this creed makes me subject to suspension or expulsion from the Club.

PASS

JUNIOR RAILROADERS CLUB

Sponsored by

The New Haven Railroad and Wm. Filene's Sons Co.

THIS CARD MUST BE SHOWN FOR ADMISSION
TO ALL CLUB MEETINGS AND ACTIVITIES

Headquarters of the Junior Railroaders' Club, Boston chapter, are in the boys' department of Filene's department store. This "pass" (above) entitles members to admission to all activities. It is countersigned by an engineer of the "Merchants Limited" and a conductor of the "Yankee Clipper"

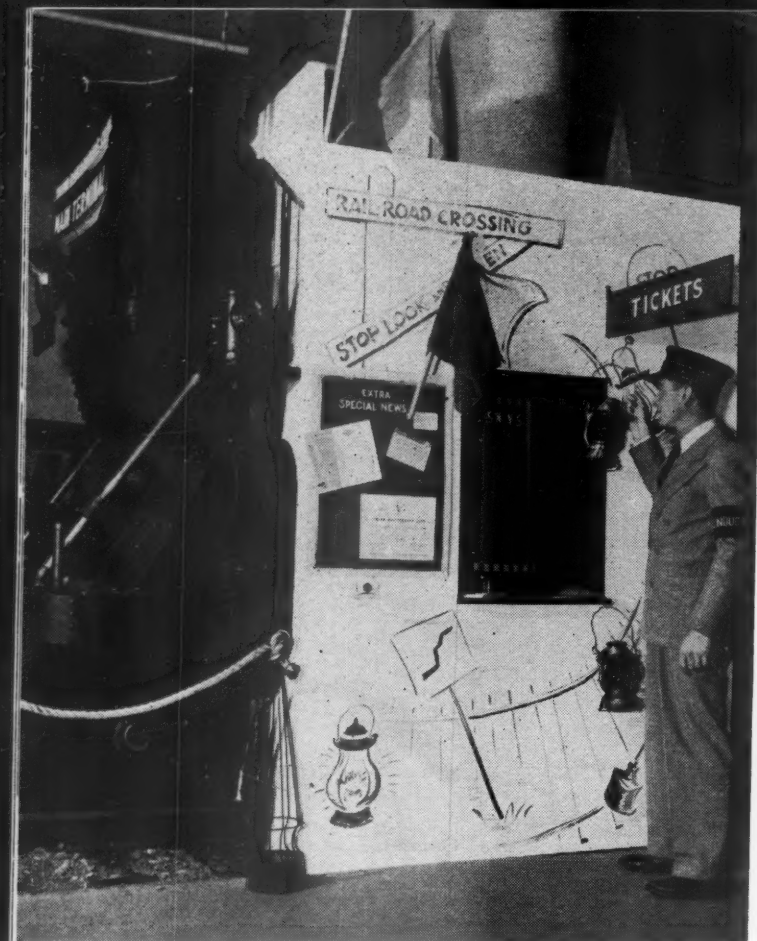
The New Haven joins a department store in fostering Junior Railroaders' Club; 500 members in Boston chapter enjoy red-blooded activities

Special New Haven trains take the boys on inspections of interesting railroad facilities

In the belief that railroading can surpass aviation in interest for boys of "middling age" between 12 and 17, if presented to them with vigor, the New York, New Haven & Hartford, in partnership with Filene's department store, late in 1947 inaugurated the Junior Railroaders' Club at Boston, Mass. The club's membership soon reached its top quota of 500, and has been so successful that the road has dubbed it the Boston chapter, in view of the possibility of organizing new groups at other points on its lines.

Headquarters of the Boston club are located in the boys' department of the city's largest specialty store, where there has been set up a "mock-up" locomotive and depot, as pictured. The club meets one Saturday morning a month during the school year, and usually every other meeting is devoted to an outside trip. Each member pays an annual fee of 50 cents, for which he receives a special "pass" giving admission to all activities. All other expenses are shared equally by the railroad and the store.

The club's activities are directed by a working committee from the staffs of the railroad and store working jointly, aided by an adult advisory committee of railroad hobbyists, educators, clergymen and business men. Current advisors include Professor Emeritus William J. Cunningham of Harvard Business School; Ellis D. Atwood, leading grower of cranberries and owner of a five-mile 2-ft.-gauge operating





The luncheon and movie performance which started off the program in January was a tremendous success

steam railroad using equipment rescued from abandoned Maine short lines; and Arthur Gould, superintendent of the Boston public schools. Honorary president of the club is T. E. Lyons, an engineer of the New Haven's "Merchants Limited," and the honorary vice-president is R. J. Goulet, a conductor of the "Yankee Clipper."

The boys are divided into groups of approximately 15, each directed by a boy "conductor" of proved leadership capability, and are held responsible for good conduct on the property of the railroad and store.

Before joining the organization, each boy must obtain the consent of parents or guardian.

Typical activities of the Junior Railroaders have been a double-feature show comprising the New Haven films, "A Great Railroad at Work" and "Play Safe"; a trip to a local engine terminal and coach yard on a special train; a trip to the Readville shops; a visit to the lay-out of a model railroad club; and a 110-mi. round-trip excursion by chartered bus to Mr. Atwood's estate, where the boys "took over" his 2 ft.-gauge system.

The Junior Railroaders enjoyed an outing to the estate of Ellis Atwood at South Carver, Mass., where they looked at his cranberry bogs and rode on his five-mile steam railroad. They are here shown taking refreshments at the depot and lunch room of his narrow-gauge line





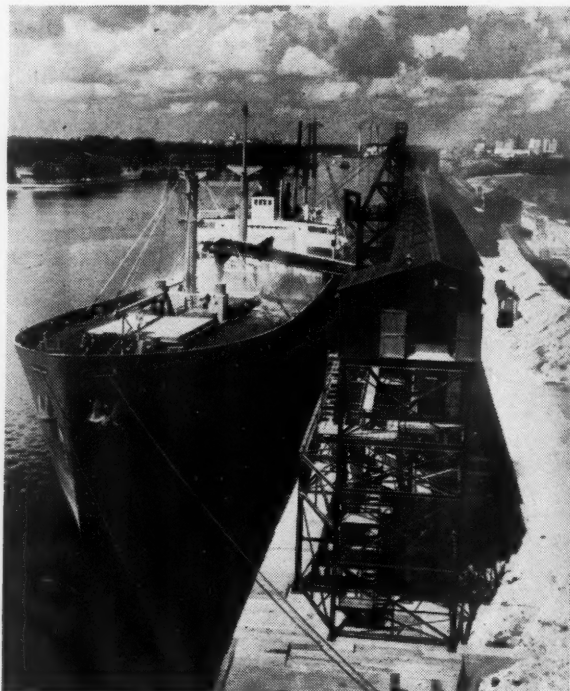
Air view of the new Seaboard rail-to-ship phosphate rock transfer facilities on Seddon Island, at Tampa, Fla.

PHOSPHATE—FROM TRAIN TO SHIP

New Seaboard Air Line rail-to-water dock at Tampa, Fla., incorporating the most up-to-date belt conveyor equipment, more than doubles capacity of former facility

Some 40 mi. east of Tampa, in central Florida, is one of the world's largest and most productive phosphate rock areas. The demand for this fertilizing material has grown amazingly in recent years and the Seaboard Air Line, which serves a number of the mines, decided in 1947 to enlarge and modernize its ship-loading facilities to handle this commodity, which is shipped in both coastwise and export trade.

The Seaboard had two docks for transferring the rock from cars to vessels. One of these, at Boca Grande, Fla., was acquired when the road bought the Charlotte Harbor & Northern many years ago. The other, built in 1912, was located on Seddon Island at Tampa, but was of too small capacity to permit the prompt loading of present-day vessels, which frequently carry as much as 10,000 tons. Accordingly, the old dock at this point was replaced by a new dock



Loading a ship. Note loading tower and boom in action. Business district of Tampa is shown in the background

containing the most up-to-date equipment for loading ships of this tonnage.

The outstanding features of the new facilities from a construction and operating standpoint are the long belt conveyors and traveling ship-loading tower, which permit the laying down of rock in ships, at any point desired, at the rate of approximately 1,500 tons an hour—more than twice the speed of the old facility. Of interest too, is the fact that the new facilities were erected without interfering with loading operations at the old plant.

The location of the dock on Seddon Island is a particularly fortuitous one. This island, originally largely a swamp and barren tide flats, was purchased a number of years ago by the Seaboard and has since been much improved by dredging and other development. It is triangular in shape and is located within a mile of downtown Tampa, from which it is separated by an artificial canal, known as Garrison channel. It is bounded on the east by Sparkman channel and on the west by the Hillsborough river. The new dock is located on the river, about 35 mi. from the open waters of the Gulf of Mexico. The depth of the channel at dockside is about 30 ft. and there is almost no tide.

Inbound ships for phosphate loading pass up the Hillsborough river to a turning basin about a half mile north of the dock, and then proceed downstream for mooring at the dock. Thus, they are headed in the right direction after loading and can proceed down-

stream into Tampa bay without the service of tugs.

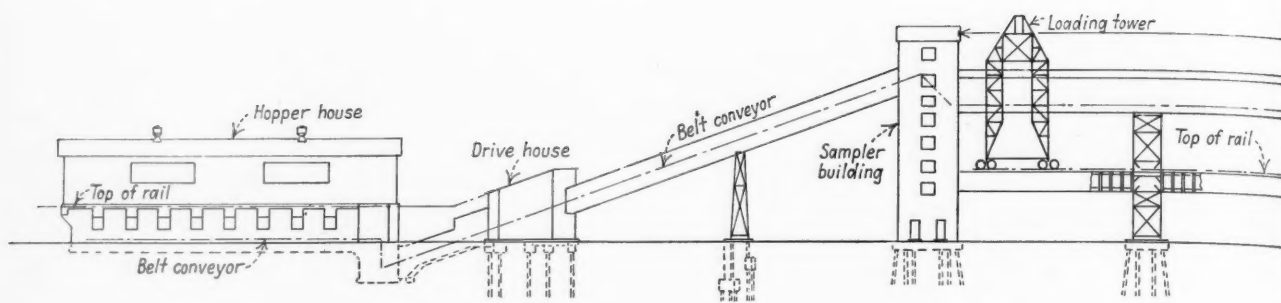
The new facilities lie in a north-to-south direction along the river front and consist essentially of a receiving yard and empty yard, a hopper house where the rock is dumped from the cars, and a series of belt conveyors which carry the rock upward into a sampler house, and then longitudinally along the dock front at a high level, through a gallery, from any point of which it can be taken off for loading into vessels alongside. Actual transfer to vessels is accomplished by means of an electric motor-driven loading tower equipped with an electrically controlled cargo trimmer. The entire unloading-loading arrangement, from the north end of the hopper house to the south end of the unloading gallery, extends over a distance of 770 ft.

Unloading the Rock

The track layout serving the elevator, practically all of which lies north of it, is so arranged that approximately 90 cars can be unloaded through the plant at a time without using a switch engine. The approach tracks leading to the facility are on a descending grade to permit feeding the cars to the foot of a slightly inclined approach to the hopper house. From this point the cars are pulled into the hopper house—two at a time—for dumping, by means of a cable attached to an electric car-haul engine. This engine is operated by an attendant located in a tower at the



Looking north along the new facilities during construction. Hopper house and empty-car kick-back track are shown at extreme right



north end of the hopper house, from which he has an unobstructed view of the hauling and dumping operations.

After the phosphate is dumped from the cars, the empties are released on a descending grade south of the house, roll through a spring switch, up a gravity kick-back track, and thence back through the switch, northward, to an empty-car yard, which has a capacity of 100 cars. Under this arrangement, all car storage is north of the elevator and there is no interference to plant operations from switching movements in placing loads or removing empties. With additional storage tracks for loads and empties elsewhere on the island, there is no congestion in either the approach yard or the empty yard, and no difficulty is encountered in maintaining a constant flow of cars through the plant, regardless of the size of the ship that is taking cargo. All of the phosphate rock handled arrives from the mines in closed-top, hopper-bottom cars, especially designed for this service.

The hopper house, which is 120 ft. long and 19 ft. 6 in. wide, encloses a single track served by eight under-track hoppers, each with a capacity of 25 tons. This house has a structural steel superstructure, covered with Robertson protected metal siding and roofing, and is supported on the walls of the reinforced concrete hopper pit.

From the hopper house the rock is transferred to ships by a series of four belt-type conveyors, each of which consists of a heavy 42-in. rubber belt mounted on troughing rollers. The first of these conveyors extends longitudinally under the series of track hoppers and the rock is fed to it by means of eight adjustable-speed roll feeders. This conveyor, designated No. 1, carries the rock to a pit at the south end of the hopper house where it dumps its contents on a second conveyor.

The Sampler House

This second conveyor, No. 2, rising on an incline of about 18 per cent, lifts the rock from the below-ground level of the hoppers to the upper level of the dock elevator. In its rise, the rock passes through a drive house, 30 ft. long by 27 ft. 6 in. wide, where the motor for conveyor No. 2 is located, and continues upward to the upper part of the sampler house. This conveyor is supported throughout on structural steelwork and is fully housed in with protected metal. Support for the conveyor carriage and housing is provided by a single tower-type bent 37 ft. 9 in. high, located about

midway between the drive house and sampler house. An automatic Weightometer weighs the rock as it passes along on conveyor No. 2, giving a check on the automatic track scale over which the rock passes while it is still in the cars.

The sampler house is 70 ft. high, 28 ft. long and 20 ft. wide, and similar in construction to the other building units. Here, at a height of 57 ft. above the dock level, conveyor No. 2 drops its load on conveyor No. 3, although a portion of the rock is taken off into automatic sampling apparatus with which this house is equipped.

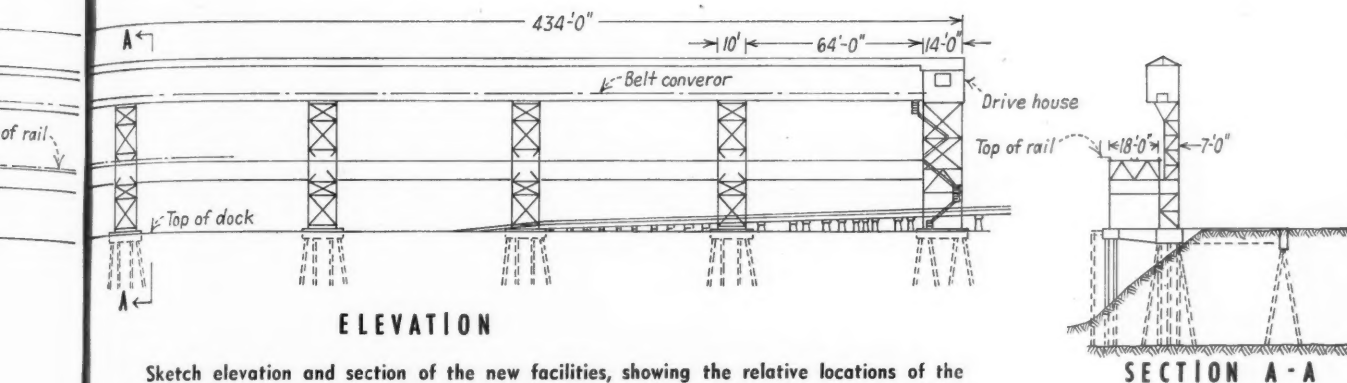
The quality of phosphate rock is determined by the percentage of bone phosphate of lime present. It is essential that this percentage be established accurately, which requires that a truly representative sample of the material be obtained. At the point where conveyor No. 2 discharges on conveyor No. 3, sample buckets on an endless chain completely cut the flow of rock every 16.6 seconds, and take half of one per cent of the rock for sampling. These samples are dumped from the buckets into a small hopper, from which they are carried over a magnetic separator to remove "tramp" iron. From this separator, one per cent of the sample is taken out for a determination of the moisture content, and 99 per cent flows into a rotary crusher, where it is reduced to particles not exceeding 3/16 in. in size.

Into the Ships

The material from the crusher is passed downward through three eight-way rotary splitters, then through a fine grinder and another eight-way splitter. The material rejected by the splitters is fed to a small elevator bucket to be returned to conveyor No. 3 at the top of the house. The final sample obtained from 10,000 tons of rock is approximately 30 lb., composed of small fractions from each 6.9 tons of rock loaded.

Conveyor No. 3 operates in a long enclosed gallery, 57 ft. above the dock level, and extends horizontally for a distance of 450 ft. to a drive house located at its extreme south end. This huge belt is kept taut by means of a vertical takeup at its south end, and a movable tripper, operating on rails under it, permits the discharge on conveyor No. 4 of material from any point within its middle 400 ft.

The No. 4 conveyor, operating at right angles to conveyor No. 3, is housed in the boom of an electric motor-driven loading tower, which is mounted on and movable along a track 25 ft. above the dock level. When



ELEVATION

SECTION A-A

Sketch elevation and section of the new facilities, showing the relative locations of the hopper house, the sampler house and the high-level conveyor gallery for loading into ships

in an upright position, this boom extends to a height of 52 ft. above the track on which the tower operates. The use of this tower eliminates moving the ship along the dock as the loading progresses. With the ship in the same mooring location throughout the loading operation, the tower moves on its track from hold to hold as required to deposit the cargo and maintain the ship on an even keel. The movable boom of the tower terminates in a loading spout, to which is attached an automatic cargo trimmer, which can be lowered quickly into any hatch for properly depositing and placing the cargo.

Structural Details

The gallery through which conveyor No. 3 travels and the girders under the track for the loading tower are supported by the framework of the sampler house at the north end, plus six tower bents spaced at intervals of 64 ft., and the drive house at the extreme south end.

The traverse of the loading tower is accomplished by two $7\frac{1}{2}$ -hp. motors driving through worm gears. The boom is raised and lowered by a hoisting drum direct-connected through a gear box to a 30-hp. motor. Three motors, of $\frac{1}{3}$ hp., $\frac{1}{4}$ hp., and 20 hp., are installed on the cargo trimmer to actuate its various movements. Power and interlocking are carried to the tower motors and controls by trolleys supported on the roof of the gallery.

All of the conveyor belts travel at a speed of 530 ft. per min. No. 1 is powered by a 15-hp. motor; No. 2 by a 200-hp. motor; No. 3 by a 75-hp. motor, and No. 4 by a 40-hp. motor. All of the motor controls are electrically interlocked to prevent flooding of the belts with moving rock, which might occur if any one of the motors was stopped or started independently. Talk-back loud-speakers are strategically located along the entire conveyor system to give the elevator foreman direct communication with each operator at any time.

The various elements of the dock facilities are supported on either concrete or creosoted timber piles, ranging from 16 to 40 ft. in length. The marine driving was done by the Bay Dredging Company of Tampa, employing floating equipment, while such driving as could be done on land was carried out by the railroad's own forces with a track-mounted pile driver. The Virginia Bridge Company handled the erection of the dock steelwork, and the major electrical work

was done by the Schaibly Electric Company and the Tampa Armature Works, both of Tampa. The Robertson protected metal siding and roofing were installed by the R. J. Gould Welding & Erecting Co. of Tampa. The conveyors throughout were furnished by the Robins Conveyors, Inc., division of Hewitt-Robins, Inc.

All trackwork, all concrete work and the installation of the conveyors were done with railroad forces. This latter work required a great deal of planning and study, not only to obtain the most efficient arrangement, but also to permit keeping the old dock in operation while the new construction was under way and until a short time before the new dock was completed. Ground was broken for construction on January 20 and the first ship was loaded the following August 1, an enviable record considering the bottleneck in materials and equipment shortage which had to be overcome.

The new facilities were built under the general direction of W. D. Simpson, chief engineer of the Seaboard, with W. N. Downey, engineer of bridges, in charge of design and construction details, and G. A. Calhoun, division engineer, Tampa, in charge on the ground.



A Baldwin 6,000-hp. Diesel-electric heads this 16-car train westbound out of Pittsburgh, Pa.

PASSENGER SERVICE DEVELOPS APACE WITH SOUTHWEST

Equipment costing over \$14,000,000 goes into new Missouri Pacific—Texas & Pacific "Eagles" linking St. Louis with urban centers of the West and Southwest

By **ROBERT G. LEWIS**
Associate Editor
Railway Age

The quick and solid growth of the principal southwestern population centers of the country will be matched by increased and improved rail communications on August 15, when these points become closer in time to the East and Middle West for passengers traveling over Missouri Pacific and Texas & Pacific routes. On that date, new "Texas Eagles," which are actually four separate streamliners — because there is a "South Texas Eagle" and a "West Texas Eagle" in each direction daily — bring near to culmination the more than \$14,000,000 postwar passenger equipment program of the two railroads. In all, there have been ordered since V-J Day 134 lightweight passenger cars, plus the necessary Diesel power to make M.P.-T.&P. "Eagle-ization" possible.

The greatly improved departure and arrival times and the reduced running time of the new "Eagle" trains will prove of advantage not only to travelers but to the railroad as well. Compared with schedules in effect when equipment was ordered, and with leaving time unadjusted at St. Louis, arrival at Houston and Galveston is four hours earlier, and at San Antonio, almost six hours earlier. Departure northward from San Antonio is 5 hr. 20 min. later, but arrival at

The enthusiasm with which the traveling public greeted the "Missouri River Eagles" and the "Colorado Eagles" prior to and during the war convinced us that "Eagle" service should be provided travelers in our Southern territory as quickly as equipment could be made available.

Studies were made during the war, and immediately after V-J Day orders were placed for sufficient equipment to operate the "Texas Eagles" between St. Louis-Memphis and the principal cities of Texas, and the "Valley Eagle" between Houston and Brownsville.

P. J. NEFF
Chief Executive Officer
Missouri Pacific Lines

St. Louis remains practically unchanged. This faster schedule permits equipment arriving at Houston and San Antonio to turn around the same day, thus reducing from three to two the number of sets of equipment required to protect the South Texas service.

The "West Texas Eagle," train No. 1, will operate with coaches and sleeping cars through to El Paso. The "Sunshine" which it replaces operated as a through train only to Fort Worth, with two El Paso sleepers continuing westward after a 4 hr. 45 min. layover.

New "Louisiana Eagles," which will go into service between New Orleans, Dallas and Fort Worth a few weeks after the "Texas Eagles," are fitted into the new schedules from St. Louis so that the M.P. saves a round trip daily between Alexandria, La., and New Orleans, 194 mi. This adjustment provides better service for passengers and, at the same time, reduces train mileage.

First "Eagles" "Earn Their Wings"

The large postwar equipment program was not undertaken without exhaustive preliminary studies. Officers of both roads worked through the research department of the Missouri Pacific in conducting a detailed study of the advisability of entering upon such an extensive modernization. It was concluded that the new trains and equipment were necessary if the M.P. and T. & P. were to meet the accelerated postwar competition offered both by other railroads and by other types of carriers; that the streamliners would not only check any losses of traffic, but also attract considerable new business.

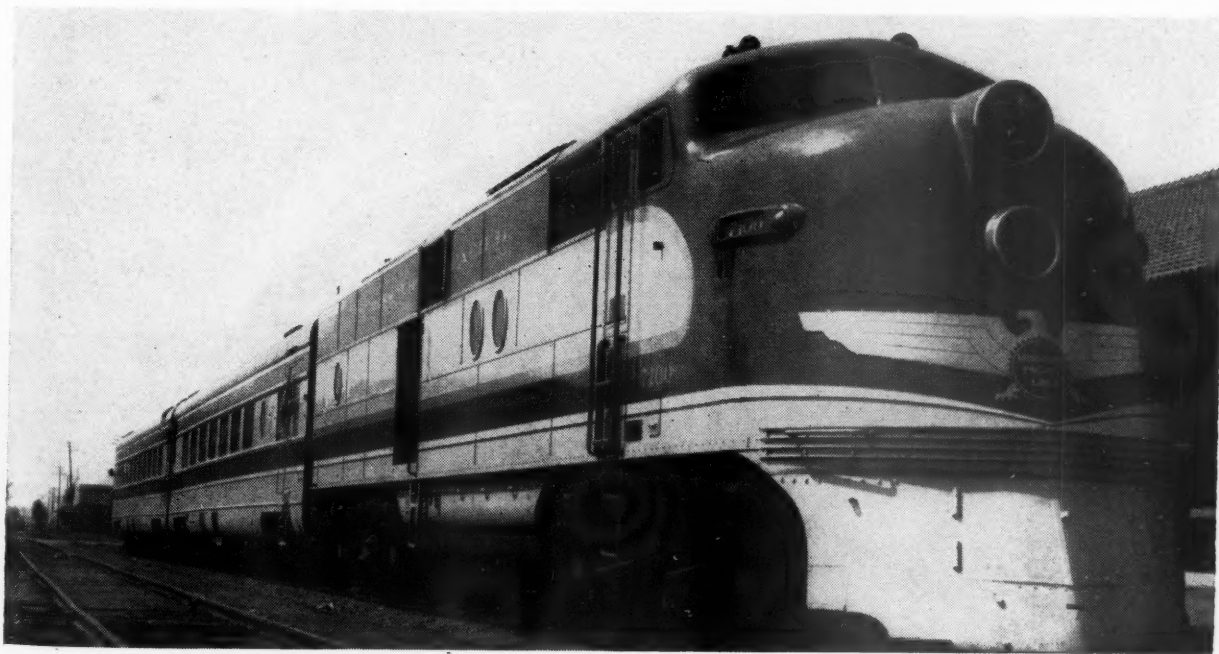
This decision was based on concrete experience. For example: The first Missouri Pacific streamliner, the "Missouri River Eagle," a six-car day train, was established between St. Louis, Kansas City, Mo., and Omaha, Neb., on March 10, 1940. During the

Table 1—Lightweight Streamlined Cars Ordered Since V-J Day For the "Eagle" Fleet

Type	Number of Cars			Builder
	M.P.	T.&P.	Total	
R.P.O. mail-baggage	8	5	13	Amer. Car & Fdy.
Baggage-dormitory	1	5	6	Amer. Car & Fdy.
Dormitory coaches	4	..	4	Amer. Car & Fdy.
Grill coaches	2	..	2	Amer. Car & Fdy.
Stateroom coaches	6	..	6	Amer. Car & Fdy.
Standard coaches	3	..	3	Budd
Divided coaches	7	2	9	Amer. Car & Fdy.
De luxe coaches	1	11	12	Amer. Car & Fdy.
De luxe coaches	3	1	4	Budd
Coach-grill lounge	5	2	7	Amer. Car & Fdy.
Planetarium dome coaches	3	..	3	Budd
Diners	1	1	2	Amer. Car & Fdy.
Diner-lounge	5	3	8	Amer. Car & Fdy.
Diner-lounge	2	..	2	Budd
14-roomettes	22	16	38	Pullman-Standard
14-roomettes . . . . .	..	..	..	Pullman-Standard
2-double bedrooms	5	1	6	..
1 drawing room . . . . .	..	..	..	..
5-double bedrooms—soda fountain lounge	1	2	3	Pullman-Standard
10-cabins . . . . .	..	..	..	Budd
6 double bedrooms	6	..	6	..
Mail-bag, coaches, diners lge.	51	30	81	..
Sleeping cars	34	19	53	..
Grand total	85	49	134	..



Postwar cars will replace older equipment in the "Colorado Eagle." Note two planetarium dome cars



The two-car "Delta Eagle" serves no major population centers on its 259-mi. journey south from Memphis. Nevertheless, net earnings paid for the initial cost of the train in 4 yr. 2 mo.



In the first full year following inauguration of the "Missouri River Eagle," Missouri Pacific's proportion of St. Louis-Kansas City ticket sales rose from 43 per cent of the total to 60 per cent

first nine months of operation, this train — on the St. Louis-Kansas City portion of its run — earned passenger revenues (excluding head-end revenue) 129.6 per cent greater than the 1939 earnings of the standard train which it replaced. For the same comparative period, system passenger revenues increased only 7.3 per cent. The per cent increase in 1941 over 1939 was 191.4 for the "Missouri River Eagles," while the system increase was but 69.3 per cent. By October 28, 1942, after 2 years, 7 months and 18 days of operation, the two sets of equipment making up this train had earned \$1,137,727 in *net income*, equal to their entire initial cost.

The "Delta Eagle," a two-car streamliner placed in service between Memphis, Tenn., and Tallulah, La., on May 11 1941, on a run over which no comparable service had been offered previously, paid for itself

within four years and two months. The third train, the "Colorado Eagle," which went into service on June 21, 1942, cost \$1,467,663. Net earnings reached that amount in 290 days. Up to December 31, 1947, it had earned \$4.10 net per train-mile.

A list of the equipment — the purchase of which was prorated between the two participating roads on a mileage basis — is shown in Table I. The assignment of the new cars is shown in Table II. The routes over which solid "Eagle" streamliners, or units of the new equipment, are operated, are indicated on the accompanying map of the passenger routes of the two roads. The map includes the route of the "Louisiana Eagle" between Fort Worth and New Orleans, the inauguration of which will not take place until about mid-September when all of the equipment will be available. The map shows also the route of the "Valley



Major curve and grade reductions on the Missouri division aid in cutting time from the "Texas Eagles' " schedules. The improvement illustrated—near Tip Top, Mo.—reduces gradient from 2.45 per cent to 1.25 per cent, and curvature from 8 deg. to 2 deg. The original main track is at the extreme right. The new line will run through the granite cut at the extreme left. The temporary track at the center will cross the cut on a temporary trestle while the last link of the cut—under the old main line—is completed

Table II—Assignment of New "Eagle" Passenger Cars

Assignment	No. of Cars
"West Texas Eagle"	39
"South Texas Eagle"	30
"Louisiana Eagle"	20
"Valley Eagle"	10
"Sunshine Special"***	4
"Colorado Eagle"***	10
"Sunflower"***	4
Train Nos. 116 & 125*	2
Train Nos. 219 & 220*	1
Unassigned	14
Total	134
***"Eagle" cars in regular trains	
**New cars replacing earlier "Eagle" units	

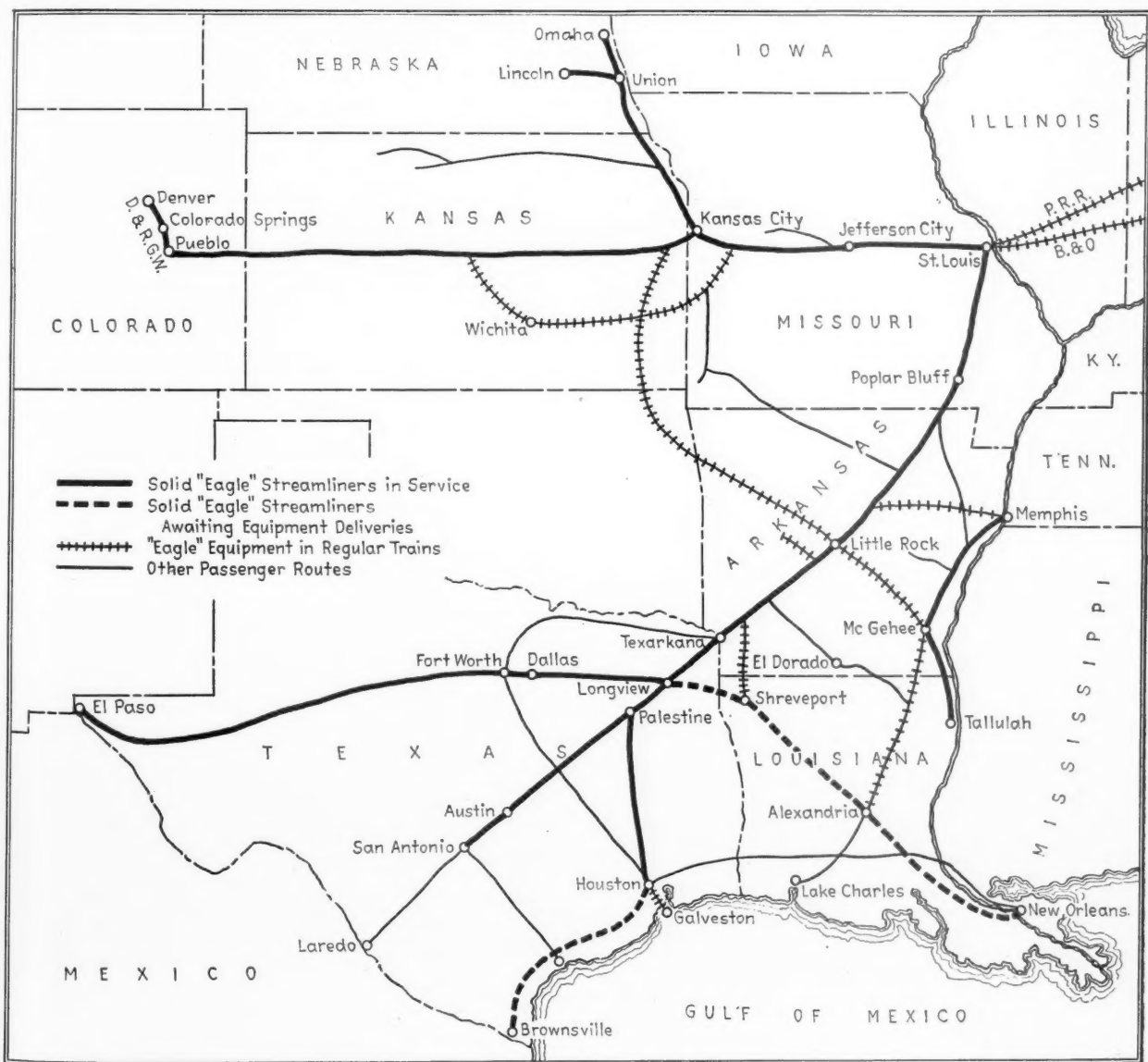
Eagle," an all coach streamliner to be established later this year between Brownsville and Houston, connecting with the "Texas Eagles" to and from St. Louis. Both the south and west "Texas Eagles" replace

corresponding sections of the "Sunshine Special," which hitherto provided the roads' top passenger service on these runs. The "South Texas Eagle," train No. 21, operates southbound with the following consist, splitting at Palestine, Tex., for San Antonio and Houston, respectively, and on the schedule indicated in Table III:

R.P.O. mail-bag.	St. Louis-Houston
Dorm-coach	St. Louis-San Antonio
De luxe coach	St. Louis-San Antonio
Dorm-coach	St. Louis-Houston
De luxe coach	St. Louis-Houston
De luxe coach	St. Louis-Houston
Diner-lounge	St. Louis-Houston
Sleeper	St. Louis-Galveston
Sleeper	Washington-Houston (from P.R.R.)*
Sleeper	New York-Houston (from P.R.R.)
Diner-lounge	St. Louis-San Antonio
Sleeper	St. Louis-San Antonio
Sleeper	New York-San Antonio (from P.R.R.)

*Will originate at St. Louis until about October 1.

The preponderance of sleeping cars are of the 14-roomette, 4-double bedroom type, and none contains



Passenger lines of the Missouri Pacific and Texas & Pacific, showing routes of the new "Eagle" trains, and lines over which units of new "Eagle" equipment are operated

open sections. The dormitory cars provide overnight accommodations for train personnel. The divided coaches differ from the de luxe coaches principally in that they are partitioned to comply with state laws in the South.

The "West Texas Eagle," train No. 1, follows No. 21 to Longview, Tex., then heads west over the T.&P. to Dallas, Fort Worth and El Paso, as shown on the map and indicated in the schedules accompanying, and is made up as follows:

R.P.O. mail-bag.	Texarkana-Dallas
R.P.O. mail-bag.	St. Louis-Fort Worth
Bag.-dorm.	St. Louis-Fort Worth
De luxe coach	St. Louis-El Paso
Divided coach	St. Louis-El Paso
Diner	St. Louis-Fort Worth
Sleeper	St. Louis-Fort Worth
Sleeper	St. Louis-Fort Worth
Sleeper-lounge	St. Louis-El Paso
Sleeper	Washington-Fort Worth (from B.&O.)
Sleeper	New York-El Paso (from P.R.R.)
Sleeper	Memphis-Fort Worth
Divided coach	Memphis-Fort Worth

Train No. 31, formerly the third section of the "Sunshine Special" continues to operate under the latter name, but on an improved schedule and with Diesel power. All of its equipment has been modernized, "skirting" added to the car bodies, and the blue and gray color scheme of the "Eagles" applied. One new "Eagle" car — a 14-roomette, 4-double bedroom sleeper — is included in the consist between St. Louis and Hope, Ark., where it is cut out for movement to Shreveport, La., over the Louisiana & Arkansas. The balance of the "Sunshine" handles cars for Mexico City, including, for the first time, a through coach **; an El Dorado, Ark., sleeper; coaches and sleepers for Hot Springs Ark., and Lake Charles, La.; and a Memphis-Houston sleeping car.

The "Louisiana Eagle," westbound, will have the following consist when it goes into service about mid-September:

R.P.O. mail-bag.	New Orleans-Fort Worth
Bag.-dorm.	New Orleans-El Paso
Divided coach	New Orleans-Fort Worth
De luxe coach	New Orleans-Fort Worth
Diner-lounge	New Orleans-El Paso
Sleeper	New Orleans-Fort Worth
Sleeper	New Orleans-Fort Worth
Sleeper	New Orleans-Fort Worth

Factors in Faster Schedules

The expedited operation of the Texas trains has been possible chiefly because the trains are Diesel-powered and are made up with lightweight equipment, all cars having electric braking. The Diesel locomotives have permitted elimination of water and fuel stops, thus shortening schedules, and servicing can be confined to principal stops where the necessary work can be done during station time.

Important improvements in the physical plant, predicated at least in part on the "Eagle" passenger program, include three line revisions completed in 1945, 1946 and 1948, respectively, on the Missouri division between St. Louis and Poplar Bluff, 165 mi. A fourth such project is now nearing completion at Tip Top and Gads Hill. The Tip Top relocation will reduce the maximum grade at this point — presently 2.45 per cent southward and 2.15 northward — to 1.25 per

**International coach rates will be established between the United States and Mexican points effective August 15.

Table III—Schedules of the New "Texas Eagles" Showing Hours Saved to and from St. Louis as Compared with "Sunshine Special" Schedules at Time When New Trains Were Ordered

Southward	South Texas Eagle		West Texas Eagle	
	Lv. St. Louis (C. T.)	Ar. Little Rock	Lv. St. Louis (C. T.)	Ar. Little Rock
Lv. St. Louis (C. T.)	5:30pm	No change	5:30pm	no change
Ar. Little Rock	12:10am	55" earlier	12:20am	25" earlier
Lv. Memphis			8:30pm	45" earlier
Ar. Little Rock			11:45pm	45" earlier
Lv. Little Rock	12:20am	1' 45" earlier	12:40am	1' 10" earlier
Lv. Texarkana	3:10am	2' 20" earlier	3:25am	1' 45" earlier
Ar. Palestine	6:30am	3' 25" earlier		
Lv. Palestine	6:50am	3' 25" earlier		
Ar. Houston	10:00am	4' 00" earlier		
Ar. Galveston	11:59am	4' 09" earlier		
Lv. Palestine	6:45am	3' 35" earlier		
Ar. San Antonio	11:45am	5' 49" earlier		
Ar. Dallas			7:40am	2' 10" earlier
Lv. Dallas			7:50am	2' 10" earlier
Ar. Fort Worth			8:30am	2' 15" earlier
Lv. Fort Worth			9:15am	4' 15" earlier
Ar. El Paso (M. T.)			10:15pm	9' 30" earlier
Northward				
Lv. El Paso (M. T.)			12:30am	3' 30" later
Ar. Fort Worth (C. T.)			4:15pm	1' 45" later
Lv. Fort Worth			5:15pm	2' 00" later
Ar. Dallas			6:00pm	2' 00" later
Lv. Dallas			6:15pm	2' 00" later
Lv. San Antonio	2:00pm	5' 20" later		
Ar. Palestine	6:55pm	3' 35" later		
Lv. Galveston	2:00pm	4' 20" later		
Lv. Houston	4:00pm	4' 15" later		
Ar. Palestine	6:55pm	3' 35" later		
Lv. Palestine	7:15pm	3' 35" later		
Lv. Texarkana	10:50pm	2' 35" later	10:40pm	1' 47" later
Ar. Little Rock	1:20am	1' 55" later	1:10am	1' 20" later
Lv. Little Rock			2:45am	no change
Ar. Memphis			7:00am	10" later
Lv. Little Rock	1:40am	1' 45" later	1:30am	40" later
Ar. St. Louis	8:20am	0' 10" earlier	8:15am	15" earlier

Table IV—Earnings of the First Three "Eagle" Trains Swelled During the War Years; Maintained a Satisfactory Level in the Period That Followed

Year	"Missouri River Eagle" St. Louis-Omaha		"Delta Eagle" Memphis-Tallulah		"Colorado Eagle" St. Louis-Denver	
	Pass.	Rev. Per Trn.-Mi.*	Pass.	Rev. Per Trn.-Mi.*	Pass.	Rev. Per Trn.-Mi.*
1940....	121,332	\$1.14				
1941....	170,171	1.36	32,906	\$.48	174,692	\$3.48
1942....	312,744	2.84	116,778	.75	527,012	6.06
1943....	456,125	4.51	187,909	1.25	608,473	7.61
1944....	480,767	4.76	204,187	1.33	560,478	6.25
1945....	459,728	4.33	188,805	1.17	375,536	4.40
1946....	333,844	3.27	171,191	1.13	292,587	3.35
1947....	269,192	2.65	147,452	.96	109,406	2.66
1948#...	114,428	2.64	55,671	.80		
	2,718,331	\$3.11	1,104,897	\$1.04	2,648,184	\$5.01

*Excluding head-end revenue

#First 6 months

cent, compensated for curvature, in both directions, and will replace an 8-deg. curve, and several only slightly less severe, with none greater than 2 deg. This relocation reduces mileage 0.7, and, together with the other projects, will cut 3 mi. from the total distance over the division. Diesel-powered trains currently negotiate the Tip Top grade, unassisted, with 13 passenger cars (steam-powered trains require a helper after 11 cars). After the Tip Top-Gads Hill project is completed later this year, passenger helper service, and the facilities required to maintain it, virtually will be eliminated on the division.

Articles describing the new passenger cars in detail will appear in early subsequent issues of *Railway Age*.



Harold W. Burtness

BURTNESS RESIGNS C. G. W. PRESIDENCY

Harold W. Burtness, president of the Chicago Great Western, tendered his resignation to the board of directors on July 13, which was accepted, effective September 1, as was reported in last week's *Railway Age*. Mr. Burtness will continue to serve on the road's board of directors and as a member of its executive committee. At the time of his promotion to the presidency in May, 1946, Mr. Burtness was only 48, one of the youngest railroad presidents in the country. His experience has been unusually broad, encompassing service with traffic, executive, financial and operating departments of various roads and, in addition, experience with the Western Association of Railway Executives.

Much of the executive direction of the Chicago Great Western actually has been in the hands of Mr. Burtness since late in 1943, when President Patrick H. Joyce became seriously ill. Only 2½ years before—in February, 1941—the road had emerged from a six-year trusteeship, the second trunk-line carrier so to come out of section 77 proceedings. As a result of the reorganization, total capitalization of the company was reduced from \$131 million to a little more than \$63 million, and annual fixed charges were cut from \$1.6 million to \$829 thousand.

Expenditures Not Stinted

Despite this substantial cut in interest obligations, the road's management has made still further drastic reductions in post-reorganization debt, chiefly by purchasing its securities in the open market, the remainder being accounted for by sinking fund accruals. As a result, a total of \$10,130,100 of first mortgage 4s issued in 1941 (as of 1938) was reduced to \$7,549,700 by July 31 of this year; total general income mortgage 4½s outstanding were cut from \$6,113,600 to \$2,839,800 during the same period; and a Reconstruction Finance Corporation note in the amount of \$6,396,870 in 1941 was whittled down to \$3,000,000 by July 31. Practically all of this reduction in debt has been accomplished in the past two years.

Despite these large debt-erasing payments, the road

has continued to enjoy an exceptionally good cash position, with \$7,579,587 on hand at the end of 1947, compared with \$7,040,438 at its beginning. At the same time the road has not stinted in expenditures for improvements, having placed in service, during 1947, three 1,000-hp. Diesel-electric switchers, costing a total of \$268,562, and six 4,500-hp. three-unit Diesel freight locomotives priced at \$2,601,038. The latter, together with six additional locomotives of the same type received this year, have enabled the railroad to Dieselize all through road freight service, except on the western lines between Oelwein, Iowa, Hayfield, Minn., and Omaha, Neb. These locomotives are sufficient largely to replace the thirty-six 2-10-4-type steam freight locomotives which have been the core of its motive power since their delivery in 1930 (re-equipped with lightweight rods and disk wheels in 1937 and 1938).

Complete Dieselization of the 1,500-mi. railroad property—except for light-traffic branch lines—is anticipated by the end of 1949 if equipment now on order is delivered as scheduled. Already received earlier this year were fourteen 1,000-hp. and three 660-hp. Diesel switchers. Listed for probable delivery later this year are two 660-hp. switchers; three 3,000-hp. road freight Diesels and three 1,500-hp. passenger locomotives. In 1949 the road expects to install two 6,000-hp. road freight Diesels, four additional 3,000-hp. passenger locomotives; fifteen 1,500-hp. units for way freight and other service; nine 2,000-hp. locomotives for the same service; and three 1,000-hp. switchers. Purchased also in 1947 were 500 steel box cars, at a cost of \$2 million, and 25 covered hopper cars.

For 1949 there are planned additional long-term improvements in fixed plant, including lengthening of passing tracks, rearrangement and enlargement of yards, and an expanded program of installation of new track and ballast. The current rate of earnings—both gross and net—has been at levels approaching the record-traffic war years. Freight revenues of the road during the first half of 1948 were up 17.3 per cent over those of the same half of 1947; net railway operating income was up 127 per cent.

Good Ratios Despite Location

Progressive Dieselization and tightening up of operations have influenced expenses to the extent that the operating ratio of the road declined from 85.2 in 1946 to 78.6 in 1947. The ratio dropped to 73.89 for the first half of 1948. June's ratios was down still further—to 71.6.

The Chicago Great Western is not a natural money-maker. It was constructed after the north mid-west territory it serves had been gridironed by older and

larger systems, enjoying long-term friendly connections and wider territories. It reaches very few of the large cities on its lines over its own rails, having to use trackage rights to gain entry, and having, therefore, to pay large joint-facility rentals. Its routes between important terminals are frequently circuitous; only on the St. Paul-Omaha run is the C.G.W. the short line.

Business Hard to Get

The railroad's business is highly competitive and must be fought for with good service and intensive solicitation. Only 38 per cent of the road's revenue tonnage in 1947 originated on line, 62 per cent having been received from connections. Of this, more than half, or 34 per cent of total tons carried, also terminated on a connecting line, being solely "overhead" to the Great Western. This type of tonnage, of course, "goeth where it willeth."

The road depends upon seasonal agricultural products and animal products for an unusual proportion of its traffic. In 1947 almost 25 per cent of its tonnage was "products of agriculture" and 7 per cent "animals and products." In terms of revenue, fresh meat, which demands high-grade service, is the biggest single item on the commodities list.

Being a later-comer and, compared with its chief competitors, not advantageously located, the Great Western has had to come forth with managerial ingenuity to build and hold its business. To mention only a few developments, the road was one of the first to experiment with gas-electric cars, the "laboratory specimens" of the modern Diesel-electric locomotive. In 1924 the Great Western bought one of the first two motor cars produced by the Electro-Motive Company (now a division of General Motors). In 1929 the road went on to place in service a motor-driven, three-car train, with de luxe accommodations, including a rear-end observation-lounge and sleeping compart-

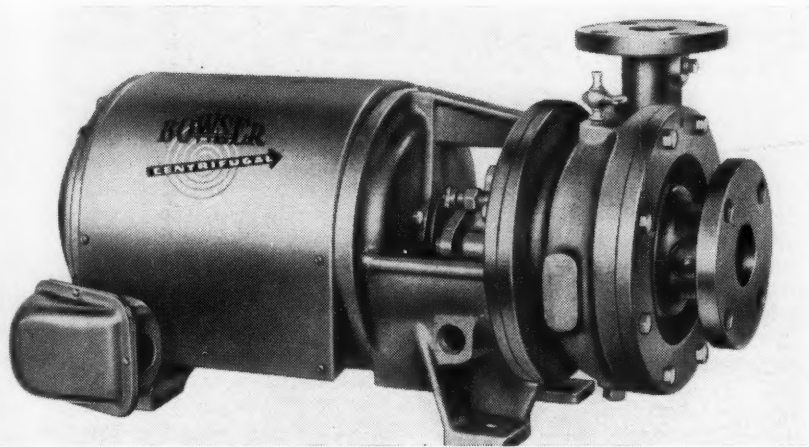
ments. The road was one of the first to develop the movement of highway semi-trailers on flat cars, starting in 1936 with 40 flat cars assigned to service on the 425-mi. Chicago-Twin Cities route. Despite the opposition of most of its railroad competitors, the Great Western gained Interstate Commerce Commission approval for performance of this service at joint rail-motor rates published in connection with existing over-the-road truck operators. The service is still in operation and, only two months ago, was extended to Council Bluffs, Iowa.

Mr. Burtness was born in Chicago on November 16, 1897, and received a high school and business college education, later studying, in his spare time, courses of the LaSalle Extension university. He entered railway service in 1914 as a clerk on the Chicago, Burlington & Quincy. In 1915 he went with the Star Union Line (now Pennsylvania) serving successively as clerk, stenographer and secretary to the manager and later as secretary to general freight agent and traffic manager of the Pennsylvania. He entered the employ of the Great Western in 1922 as secretary to the president, serving in this capacity until 1933. From 1925 to 1930 he was also secretary to the chairman of the board and secretary to the chairman of the Western Association of Railway Executives. Mr. Burtness was advanced to assistant to the president and secretary of the road in 1933, and on June 15 of the following year he was also placed in charge of the transportation department and was elected a vice-president and director of six subsidiary companies and president of the Great Western Coal Company, another affiliate. When the road was placed in trusteeship in 1935, he was appointed assistant to the trustees, continuing his other duties unchanged. Mr. Burtness was elected vice-president, transportation, of the reorganized company which assumed control of the road in February, 1941. He was elected president on May 21, 1946, and succeeded P. H. Joyce as chairman of the executive committee on December 3, 1946.



This new 6,000-hp. Alco-G.E. Diesel is going into service on the Southern Pacific's "Shasta Route"

NEW AND IMPROVED PRODUCTS OF THE MANUFACTURERS



One of the new Bowser centrifugal pumps

CENTRIFUGAL PUMPS

Bowser, Inc., Fort Wayne, Ind., has announced a new line of centrifugal pumps consisting of single and two-stage units, including self-priming types, with ratings ranging from $\frac{1}{4}$ hp. to 75 hp. and capacities from 10 g.p.m. to 2,500 g.p.m. They can be used for pumping liquids with viscosities of wide range.

Four models are available: (1) Motor and pump close-coupled with common shaft and mounted together on four supports, two under the motor and two under the pump; (2) close-coupled with pump mounted on an extended motor shaft and pump adapter, the entire unit being mounted on four supports, all

under the motor; (3) pump mounted on base plate, with or without a motor and flexible coupling; and (4) a self-priming pump mounted on a base plate, with or without a motor and flexible coupling.

RAIL-FLAW DETECTOR CAR

A new rail-flaw detector car consisting of an automobile-type inspection car equipped with detector apparatus, a recording unit, paint gun and hand-test equipment has been developed by Teleweld, Inc., Chicago, through a subsidiary company—Teledetector, Inc. Flaw de-

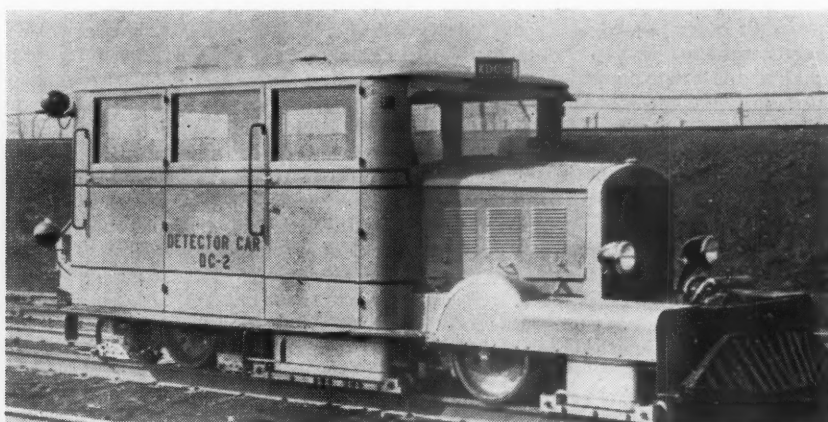
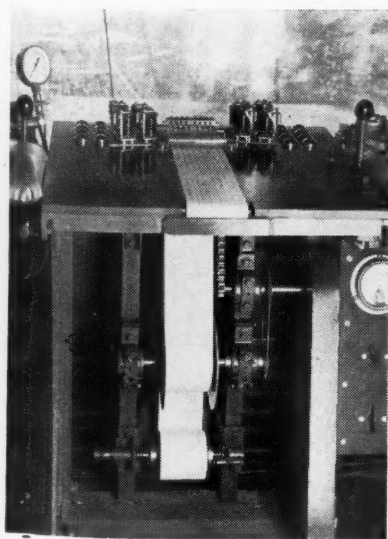
tection is accomplished by small, non-magnetic core, pick-up coils operating in a trailing, sustained magnetic field. Both rails of the track are tested at the same time.

The recording unit provides a permanent paper tape record which is synchronized with the movement of the car.

The data picked up by the detector apparatus are recorded on the tape by eight pen units, four for each rail. The first pen unit for each rail records joints only, providing a landmark or locating means on the tape. The second pen unit records defects in the gage portion of the rail head. The defects in the center and field portions of the rail head are recorded by the third and fourth pens, respectively.

It is stated that, with the new car, internal flaws, including transverse defects five per cent or more of the rail-head area in size, are recorded throughout the length of the rail, including the portion within the joint bars to within 5 in. of the ends of the rails. It is also asserted that the operation of the car is not affected by joint bars, bolt holes, high spikes, rail anchors and braces or any other track fastenings; and that it operates successfully through switches, frogs, crossings and guard rails. When a flaw is picked up by the detector apparatus, the paint gun places a spot of paint on the rail within one inch of the location of the flaw, it is said.

The unit operates at a testing speed of about 7 m.p.h. and is said to be capable of covering from 15 to 25 mi. of track per day, depending on the condition of the rail and traffic.



The Teledetector rail-flaw detector car. Left—Close-up view of the recording apparatus in the new detector car

GENERAL NEWS

House Group Raps G. A. O. Audit System

Check of government freight bills found to be "basically defective"

An accelerated audit system employed during World War II by the General Accounting Office was "basically defective" and "grossly mismanaged" to the extent that the G. A. O. failed to detect approximately \$350,000,000 in "overcharges" paid by the government on "common carrier" shipments of wartime freight, Representative Bender, Republican of Ohio, chairman of a subcommittee of the House committee on expenditures in the executive departments, charged this week. The accelerated system, the subcommittee chairman said, was adopted because of "wartime difficulties" and because of "pressure from the carriers transmitted through the War Department."

Representative Bender's remarks were addressed to Representative Hoffman, Republican of Michigan, chairman of the committee, in a letter accompanying the subcommittee's report embodying its findings with respect to its investigation of the adequacy of the G.A.O.'s audit of vouchers for the payment of the government's wartime transportation of freight by "common carriers"—principally the railroads.

The subcommittee, meanwhile, explained that the "overcharges" involved are calculated on the basis of published tariffs or section 22 quotations, and are not to be confused with the reparations cases brought by the Department of Justice or other "controversy" over the "unreasonableness or other unlawfulness" of the rates charged the government during the war.

More Charges Made

At the same time, however, Representative Bender advised the committee chairman that the subcommittee had "intimations" that the interest of the government was not "adequately protected" on the original fixing of freight rates. He added, however, that such matters lie outside the area of the G.A.O.; but they are being explored by the subcommittee in current hearings with respect to the proposal of establishing a centralized traffic bureau (see *Railway Age* of July 31, page 43, and previous issues).

The subcommittee also pointed out that government administrative agencies, in accordance with the provisions of

the Transportation Act of 1940, paid the vouchers of the common carriers as submitted without "prior audit." The vouchers were then subject only to audit by the G.A.O. after payment.

"From my examination of the data presented before us," Representative Bender said in his letter to Representative Hoffman, "I am forced to conclude that the General Accounting Office, often termed the 'watchdog of the Treasury,' fell asleep on the auditing of the government's transportation bills. Your subcommittee waked the sleeping watchdog. I am pleased to state that at the prodding of the subcommittee the General Accounting Office has shown every disposition to bestir itself and to take prompt measures for the protection of the government's interest and the recovery of the moneys overpaid."

According to Mr. Bender, the subcommittee, as the result of its investigation, has set in process a re-audit of the wartime freight vouchers which will return to the Treasury approximately \$350,000,000, subject to tax adjustment. The G.A.O., he added, has "voluntarily assured" the House group that it is undertaking a reorganization of its personnel and procedures and that it has already made "initial moves" in that direction.

Say Railroads Can Pay

The subcommittee, meanwhile, contended in its report that, on the basis of Interstate Commerce Commission figures, the railroads "at least are able to repay the overcharges which will be detected in the re-audit." It also said it is of the opinion that, contrary to the expressions of Comptroller General L. C. Warren, the carriers are "adequately protected" in their right to make tax adjustments on such refunds.

The report went on to point out that the freight bill of the federal government increased from approximately \$38,000,000 annually before World War II to approximately \$2,000,000,000 in 1944, in which year, it added, the number of vouchers and bills of lading submitted was about five times the prewar number.

"Not only did the volume of traffic increase but after 1940 and particularly during the war years the percentage of overcharges on freight vouchers submitted by common carriers and paid by the government departments reached the height of 10 per cent to 12 per cent," the report stated. "This may be compared with 1 per cent to 2 per cent overcharges on freight bills prior to 1940. Thus if these percentages should

govern throughout, it would follow that the common carriers overcharged the government approximately \$650,000,000 on the freight bills for the three years 1943, 1944 and 1945 alone. This does not include passenger traffic or freight bills of cost-plus contractors paid by the government. These overcharges resulted in part from the innate complexity of freight rates and in part from the inexperience of wartime employees of the carriers working under wartime pressure."

Wartime Audit Accelerated

The subcommittee also held that such overcharges resulted in part also from a policy adopted by some of the carriers to bill rates higher than the lowest available rates, notwithstanding the certification made on each voucher that the lowest available net rate was used, and in this connection observed that one G.A.O. employee produced worksheets showing discovery in one month of over \$1,000,000 of overcharges on vouchers

FARICY COMMENTS ON BENDER REPORT

Commenting on the report made public this week by a subcommittee of the House committee on expenditures in the executive departments, William T. Faricy, president of the Association of American Railroads, called attention to "two points" in connection with the audit of railroad freight charges by the General Accounting Office.

"One is that a very large part of the supposed overcharges is due to differences of opinion between the railroads concerned and the government auditors as to whether certain freight handled during the war was property of the government used for military and naval purposes," Mr. Faricy said. "If so, it would have been entitled to receive deductions from the regular rates on account of land grants. If moving for civil purposes, it would not have been so entitled. The question is one of fact and law in each case."

"A second point to note is that the audit made of the many millions of transactions involved is a one-way audit. Where an error is found which led to an overcharge of the government, it is reported and refund of the overcharge claimed. Where an error which resulted in an undercharge to the government is found, and of course there are many such, it is ignored. There is no evidence as to what would be shown by a balanced audit, taking account of both overcharges and undercharges."

totaling \$2,735,000 submitted by one railroad.

According to the report, the so-called "Accelerated Audit Plan" was adopted on October 1, 1945, when the G.A.O. found itself 33 months behind in its audit and falling "further behind." It continued to make use of the accelerated plan until July 1, 1947, when the pre-1945 procedures were in large part re-adopted. During the period of the accelerated plan, the report went on, the G.A.O. discovered overcharges totaling approximately \$350,000,000.

"Subcommittee hearings [at which no railroad officers were called to testify] indicate the probability that the amount should have been approximately \$700,000,000, leaving approximately \$350,000,000 remaining to be discovered by re-audit," the report continued. "This estimate is based on the premise that in fiscal 1944, the year prior to the accelerated audit, overcharges of approximately 10 per cent of the amount of the vouchers audited were discovered while the average for the accelerated audit period (fiscal 1945, 1946) was only about 4 per cent of the amount audited. Whatever the exact amount turns out to be, the subcommittee feels that all overcharges can be found and should be collected by a thorough re-audit program."

Plan Was "Defective"

The subcommittee conceded that the G.A.O. was justified in adopting the accelerated plan in 1945—although, it added, the plan adopted was itself "defective" in several respects—and that the decision to have the most experienced men "screen" the bills of lading for audit, laying aside those which did not have "obvious overcharges" of \$50 or more, may have been justified under the "particular circumstances." At the same time, however, it said it could not agree with the decision of the G.A.O. to accept as full settlement any refund of overcharges by carriers if within \$25 of the amount determined as overpaid. Vouchers screened but otherwise not examined, it also held, should have been segregated for audit after cessation of the war.

The House group specifically described as a "defect" in the plan the understanding reached with the Association of American Railroads not to audit "inbound transit" bills which were "known by the G.A.O. to be billed generally at full commercial rates without land grant deductions."

"The understanding was based on the assumption that the outbound or destination carriers would make refunds of the overcharges on inbound shipments," the report went on. "While some carriers did make refunds and in large amounts, the agreement to do so was not kept by others and the General Accounting Office relying upon the assurances had no method of checking whether or not refunds were being made. The General Accounting Office was aware that outbound transit bills

of lading did not contain inbound references or other sufficient information to associate them properly with the inbound bills and thus protect the through rate, and the 'transit certificates' designed to afford adequate audit information on transited shipments were not used. . . . Thus not only was the government not protected in the applicable through rates, but tremendous overcharges on the inbound bills never received audit attention at all. These so-called transit shipments accounted for at least 40 per cent of the volume of wartime freight and this single factor was obviously responsible for the failure to detect many millions of dollars in overcharges."

1947 Revenue and Traffic Of Regulated Water Carriers

Water carriers under the regulatory jurisdiction of the Interstate Commerce Commission reported 1947 freight revenues of \$148,793,725, an increase of 72 per cent above the \$85,511,505 reported for 1946, according to data compiled by the commission's Bureau of Transport Economics and Statistics. The compilation is statement No. Q-650.

It also shows that the 1947 passenger revenues of the reporting water carriers totaled \$15,917,784, up 11.4 per cent from 1946's \$14,290,691. Tons of revenue freight carried in 1947 totaled 67,401,249 as compared with 52,442,354 in 1946, while the number of revenue passengers decreased from 12,686,967 in 1946 to 10,698,610 last year.

The largest relative gain in freight revenue was reported by the Atlantic and Gulf coasts group of carriers — \$28,881,753 in 1947 as compared with \$13,826,662 in 1946, an increase of 108.9 per cent. Next came the intercoastal group, with a 98.6 per cent increase — from \$29,136,433 to \$57,877,768. The largest relative gain in passenger revenues was reported by the Pacific Coast group — \$4,684,093 as compared with \$3,152,847, an increase of 48.6 per cent. Carriers in the Great Lakes and Mississippi river and tributaries groups reported lower passenger revenues in 1947 than in 1946.

More Rates on Ex-Barge Grain Equalized with Ex-Rail Basis

Bringing the grain-rate adjustment it prescribed in I. & S. No. 4208 into line with the United States Supreme Court's decision in the so-called Ex-Barge Grain case, the Interstate Commerce Commission has found that railroad proportional rates on grain and grain products from St. Louis, Mo., Cairo, Ill., and Memphis, Tenn., to destinations in Southern territory, when such traffic is brought to those gateways by a common carrier by water, should not exceed proportional rates applicable on like traffic arriving at the gateways by rail. The finding, embodied in a report on reconsideration, modifies that phase of the original

decision (see *Railway Age* of April 14, 1945, page 671) which had prescribed proportional rates on the ex-barge grain differentially higher than the ex-rail basis.

Examples of the rates involved, as set out in the present report, show that ex-rail grain moving through Memphis to Meridian, Miss., and Atlanta, Ga., took proportionals from Memphis of 17.5 cents and 27 cents per 100 lb., respectively. These compare with rates of 23 cents and 33.5 cents, respectively, on ex-barge grain. The rates on ex-rail grain moving through St. Louis to the same destinations were 25.5 cents and 35 cents, respectively, as compared with rates of 30.5 cents and 40.5 cents, respectively, on ex-barge grain. These examples do not include general rate increases which became effective subsequent to January 1, 1947.

The equalization now ordered by the commission was sought by the government-owned Inland Waterways Corporation, operator of the Federal Barge Lines. The original I.W.C. petition of July 20, 1945, was denied by the commission, but a second one was filed on January 9, 1946, the commission deferring consideration of it until the Supreme Court rendered its decision in the Ex-Barge Grain case which raised similar issues. That decision, in *Interstate Commerce Commission v. Mechling*, 96 L.Ed.817, set aside a commission order authorizing rail proportional rates on ex-barge grain from Chicago to eastern destinations differentially higher than those applicable on ex-rail or ex-lake grain (see *Railway Age* of April 5, 1947, page 706).

The proportional rates involved in that case, the commission's present report says, "were equalizing proportionals in the same sense as are those involved herein, although in that case there was only one reshipping gateway while here there are several." Railroad contentions that there must be a preliminary finding that I.W.C.'s rates for its water hauls to the gateways are compensatory before the commission can remove the alleged discrimination, and that the proportional rates sought would result in combination rates on bargerail traffic lower than the local rates from the gateways, appeared to the commission to have "no relation or relevance to what the proportional rates on ex-barge traffic from the gateways should be, under the principles announced by the Supreme Court."

The accompanying order requires the railroads to establish the equalizing adjustment on or before October 21. The dissent of Commissioner Miller was noted, while Commissioners Splawn and Barnard did not participate.

Prizes for Railroad Fair Photos

A week's stay in New Orleans for two persons, all expenses paid, are two of the prizes being offered by the Illin-



Maintenance and repair of most of the 234 vessels operated by the Erie in and around New York is now accomplished with the aid of a new welded steel 400-ton floating dry dock. The dock, shown submerged as harbor tug "Cleveland" is maneuvered into position for lifting, recently was put into service at the road's marine terminal, Pier I, North River, Jersey City, N. J. It was designed by engineers of the Erie and the Dravo Corporation and constructed by Dravo at its Wilmington, Del., shipyard. The new equipment permits more effective utilization of the road's marine repair facilities that were enlarged in 1942 but did not permit work below the waterline

ois Central for the best photographs taken at the road's Railroad Fair exhibit in Chicago. Twenty-six awards will be made for both color and black-and-white pictures, with each type being judged separately. Additional prizes in each class will be \$50 for second place, \$25 for third place and \$10 each for fourth to 13th places, inclusive. The contest is open to both amateur and professional photographers, except employees of the I. C. and their immediate families.

C.A.B. to Investigate Large Irregular Air Carriers

The Civil Aeronautics Board has instituted a general investigation into the practices and activities of "large irregular air carriers," i.e., those operating so-called "non-scheduled" services for the transportation of passengers or property under exemptions contained in section 292.1 of the board's economic regulations. Meanwhile, the board has amended that section to provide that no additional operations of large irregular carriers will be authorized under the exemption proviso unless applications for the necessary letters of registration were filed prior to 11:00 a.m. August 6; and it has directed its staff to re-examine the section "in the light of experience gained since the regulations were promulgated in May, 1947."

"The purpose of the investigation into the activities of the large irregular air carriers is to determine whether civil or criminal proceedings should be brought on behalf of the board for violations of the Civil Aeronautics Act and the board's regulations," the board's announcement said. It added that the inquiry would include "an examination

into the practices whereby a number of large irregular air carriers appear to be acting in concert, frequently with the assistance of ticket and travel agencies, to furnish regular air service." Hearings in connection with the investigation will be opened "in the near future."

As to the directive requiring its staff to reexamine section 292.1, the announcement said that the board there called for "an immediate appraisal," which is "now underway," of the question of "whether operations contemplated by that section for large irregular air carriers had been, and are, useful to the public and economically feasible." An "important announcement" concerning this matter was promised "in the near future."

Lets Burlington Subsidiary Continue All-Motor Service

Reversing its Division 5, the Interstate Commerce Commission has authorized the Burlington Truck Lines, subsidiary of the Chicago, Burlington & Quincy, to continue on a permanent basis the "all-motor" common-carrier trucking service which it has been operating under temporary authority on a 66-mile route between Des Moines, Iowa, and Albia. The commission's decision was embodied in a report on reconsideration in No. MC-107500 (Sub-No. 5), the report noting the dissents of Chairman Lee and Commissioners Rogers and Patterson, who comprise Division 5.

The certificate under which the Burlington subsidiary was originally authorized to operate on the route contained the usual conditions designed to keep the trucking services auxiliary to rail service of the parent railroad. In 1944, temporary authority for the all-motor

operations was granted at the request of business interests at Knoxville, Iowa, one of the communities served.

In the prior report on Truck Lines' application for such authority on a permanent basis, Division 5 based its adverse ruling on findings that: (1) Under its original certificate, the applicant could serve all important points on the proposed route, subject merely to the restriction that the shipments handled move on rail rates and rail billing; (2) that the applicant had not justified removal of the restrictions on a permanent basis nor shown any real need for added service at non-rail points; and (3) that rail carriers and their affiliates have consistently been denied authority to engage in motor-carrier operations not auxiliary to, or supplemental of, rail service. In the latter connection, the commission's report on reconsideration noted that this policy, as set out in *Rock Island M. Transit Co. — Purchase — White Line M. Frt.*, 40 M.C.C. 457,473, was subject to exceptions in cases where "unusual circumstances" might justify a grant of unrestricted trucking authority to a railroad or its affiliate.

"We believe," the commission continued, "that evidence in this proceeding fairly establishes a need for the continuance of applicant's unrestricted temporary service, and that a grant of authority to that extent is justified. Applicant's is the only general commodity motor-carrier service available over the described route, with the exception of that offered by C. G. Prange, of Pleasantville, Iowa, between Des Moines and Knoxville. The latter actively supports the application both as a shipper and an interlining motor carrier, and urges a grant of authority corresponding in scope to applicant's present temporary authority. The supporting shippers have been relying on applicant's service, and if such service is discontinued would be without other adequate service by motor vehicle."

Since the permanent authority will be the same as the temporary authority, it will, as has the latter, be subject to one restriction — that limiting the service at Knoxville to the pick-up of southbound shipments and the delivery of northbound shipments, thus precluding the rendition of service between Des Moines and Knoxville.

Commission Stays Further Steps In St. Louis Controversy

Division 3 of the Interstate Commerce Commission has stayed without prejudice further steps in the No. 28851 proceeding, wherein the city of St. Louis, Mo., has asked the commission to require the Terminal Railroad Association and connecting proprietary railroads to make certain track changes on the west side of the Mississippi river at St. Louis and to reroute certain trains on the east side of the river so they will cross the city-owned MacArthur Bridge instead of the terminal company's bridge.

The commission's order in the six-year-old case noted that it has been advised by the parties that a definite time for completion of the negotiations into which they have entered cannot be determined. As reported in *Railway Age* of April 10, 1943, page 747, Examiner G. H. Mattingly recommended that the commission dismiss the city's petition.

1948 First-Quarter Loading Estimates 6.7 Per Cent High

The 13 Shippers Advisory Boards overestimated carloadings for the first quarter of 1948 by 6.7 per cent, according to the latest comparison of forecasts with the actual loadings issued by A. H. Gass, chairman of the Car Service Division, Association of American Railroads. The variations by individual boards ranged from an overestimate of 15.3 per cent to an underestimation of 3.8 per cent, while the variations by commodities ranged from an overestimate of 27.7 per cent in the case of citrus fruits to an underestimation of 7.4 per cent on agricultural implements and vehicles, other than automobiles.

The report shows that there were overestimates in 24 commodity groups and underestimates in eight. In addition to citrus fruits, there were overestimates of 23.6 per cent on grain; 22.3 per cent on live stock; 17.2 per cent on sugar, syrup and molasses; and 16.6 per cent on poultry and dairy products. Among the larger underestimates were 6.1 per cent on petroleum and petroleum products; 4.7 per cent on cotton; and 4.6 per cent on automobiles and trucks.

The report also showed that the carloadings were overestimated in 11 board districts and underestimated in two.

Comparison National Forecast with Actual Carloadings—First Quarter 1948

Board	Carloadings		Percentage of Accuracy 0 or Under
	First Quarter Estimated	1948 Actual	
Central Western	314,704	272,306	13.5
Pacific Coast	370,455	332,032	10.4
Pacific Northwest	257,541	232,994	9.5
Great Lakes	480,046	440,108	8.3
Ohio Valley	1,074,465	1,018,251	5.2
Mid-West	962,648	896,999	6.8
Northwest	293,557	248,811	15.3
Trans-Mo-Kansas	402,948	361,947	10.2
Southeast	1,010,054	930,603	7.9
Southwest	524,712	538,584	2.6
New England	176,349	165,445	6.1
Atlantic States	864,605	897,035	3.8
Allegheny	1,182,281	1,052,076	11.0
Total	7,914,365	7,387,191	6.7

Large Exhibit Planned at Roadmasters—B.&B. Conventions

The exhibit of materials and equipment to be held jointly by the Track Supply Association and the Bridge and Building Supply Men's Association at the Hotel Stevens, Chicago, September 20-22, during the concurrent annual conventions of the Roadmaster's Association and the Bridge and Building Association, promises to be the largest

ever held by the two supply groups. According to Lewis Thomas, director of exhibits, this year's display will fill the hotel's exhibition hall and will overflow into the lower lobby. A total of 90 companies have arranged to take part in the display and will occupy 159 booths, as compared with 96 companies and 153 booths in last year's exhibit. At least six of the firms in this year's exhibit are taking part for the first time.

FARICY REBUTS YOUNG'S CHARGE THE RAILROADS "PROGRESS IN REVERSE"

In a recent letter to Representative Charles A. Wolverton, Republican of New Jersey, the chairman of the House committee on interstate and foreign commerce, Robert R. Young, chairman of the Chesapeake & Ohio, has commented at some length on a recent statement to that committee by President William T. Faricy of the Association of American Railroads (reported in *Railway Age* of June 19, page 33), which followed Mr. Young's appearance before that committee. Mr. Young's letter was published in the August issue of *Railway Progress*. Excerpts from it appear below, followed by an abstract from Mr. Faricy's letter to Mr. Wolverton discussing it.

The inquiry of your committee into the adequacy of the railroads for the national defense [wrote Mr. Young] opened and closed on Mr. Faricy's happy note of efficiency. But charged now as I am by you of keeping your committee advised I refer you to the June report of the American Railway Car Institute which, in commenting upon the car shortages, said, "The outlook for the future is just as discouraging as reported by the Office of Defense Transportation."

If the future is discouraging, what of the past? Since V-J Day, it is estimated that the following net increases (additions in excess of replacements) have taken place in our national inventories of transportation vehicles other than rail:

	Increase in Number of Vehicles	Per Cent Increase Since V-J Day
Autos	6,500,000	27
Buses	23,000	12
Trucks	2,000,000	46
Airplanes	65,000	186

In contrast with the above increases of competing vehicles requiring vast tonnages of steel, our already deficient fleet of freight cars, allegedly for want of steel, has decreased in number 28,000 or 2 per cent since V-J Day; sleeping cars have decreased 607, or 9 per cent; and day coaches have decreased 157, or 1 per cent. The now tragic state of railroad equipment raises the question of A.A.R. sincerity when, with all its huge purchasing and political power, it takes such medicine lying down.

It would be interesting to know where Mr. Faricy and his associates have placed their bets. They run the railroads as if the reserve for their own old age was

The display each day will be open from 9 a.m. to 6 p.m.

Some exhibit space is still available and companies desiring to participate should address Mr. Thomas, 59 E. Van Buren st., Chicago.

The 90 companies that have arranged for exhibit space are:

Achuff Railway Supply Company, St. Louis, Mo.
Air Reduction Sales Company, New York

carefully tucked away in the stocks of the motors, bus, truck, or air lines. Why else do they inconvenience themselves to attend railroad board meetings unless it is to secure some hidden emolument, or to make sure that the railroads do not offer too much competition to their real love, their other and undisclosed investments?

Knowing who Mr. Faricy and the A.A.R. really represent makes it easier to understand their progress in reverse when it comes to such things as:

1. Forced layovers at Chicago which advantage the air lines.

2. Western freight slowdowns by agreement, so that it takes longer from the West Coast to Chicago by rail than from the West Coast to New York by truck.

3. Block booking of Pullman space to the disadvantage of everyone but the air lines.

4. A per diem rental that penalizes freight car buying, and puts a premium upon chiseling with offline cars.

5. Lackadaisical passenger car designing and buying which render the railroads impotent in long and short haul competition with the buses and air lines.

In the meantime, new deliveries of subsidized trucks, buses, autos, ships and airplanes pour out onto our subsidized highways, airways and waterways to squeeze the remnant of life that is left out of our overtaxed and underfed railroads—after 61 years of I.C.C. "accomplishment" and 16 years of A.A.R. "efficiency."

In his letter to Mr. Wolverton dated August 10, Mr. Faricy said in part:

Mr. Young's letter indulges in baseless columnies of the now familiar type that he so frequently heaps upon those with whom he disagrees. His assertions and innuendoes to the effect that railroad directors deliberately mismanage the railroads in the interest of other forms of transportation are completely false and are in the realm of fantasy. They merely repeat and extend Mr. Young's other fantastic statements made before your committee on June 8, 1948.

In appearing before your committee on June 14, I said, and I now repeat, that they are broadside charges of breach of trust and lack of integrity, put forward without a shadow of proof. They are such allegations as no responsible man would make unless he were in a position to sustain them—which Mr. Young is not, because they have absolutely no foundation in fact.

American Brake Shoe Company, Ramapo
Ajax division, Chicago
The American Fork & Hoe Co., Cleveland,
Ohio
American Lumber & Treating Co, Chicago
American Structural Products Company; sub-
sidiary of Owens-Illinois Glass Company,
Toledo, Ohio
Armco Drainage & Metal Products, Inc.,
Middletown, Ohio
Austin-Western Company, Aurora, Ill.
Barco Manufacturing Company, Chicago
Bernuth Lembcke Company, New York
Buda Company, Harvey, Ill.
Caterpillar Tractor Company, Peoria, Ill.
Chain Belt Company, Milwaukee, Wis.
Chicago Pneumatic Tool Company, New York
Chipman Chemical Company, Bound Brook,
N.J.
Crerar, Adams & Co., Chicago
Cullen-Friedstedt Company, Chicago
Dearborn Chemical Company, Chicago
Duff-Norton Manufacturing Company, Pitts-
burgh, Pa.
Electric Tamper & Equipment Co., Ludington,
Mich.
Fabreeka Products Company, Boston, Mass.
Fairbanks, Morse & Co., Chicago
Fairmont Railway Motors, Inc., Fairmont,
Minn.
G. & H. Rail Controls, Inc., Kansas City, Mo.
Gravelly Ia-Nois, Inc., Davenport, Iowa
Hayes Track Appliance Company, Richmond,
Ind.
W. F. Hebard Company, Chicago
Homelite Corporation, Port Chester, N. Y.
Hubbard & Co., Pittsburgh, Pa.
Illinois Malleable Iron Company, Chicago
Independent Pneumatic Tool Company, Chi-
cago
Ingersoll-Rand Company, New York
Johns-Manville Company, New York
O. F. Jordan Company, East Chicago, Ind.
Joyce-Cridland Company, Dayton, Ohio
Kalamazoo Manufacturing Company, Kalama-
zoo, Mich.
Kershaw Company, Montgomery, Ala.
Koebring Company, Milwaukee, Wis.
Wood Preserving division, Koppers Company,
Pittsburgh, Pa.
Lehon Company, Chicago
Le Roi Company, Milwaukee, Wis.
R. G. Le Tourneau, Inc., Peoria, Ill.
Link-Belt Speeder Corporation, Cedar Rapids,
Ia.
Lundie Engineering Corporation, New York
Mack Welding Company, Duluth, Minn.
Maintenance Equipment Company, Chicago
Mall Tool Company, Chicago
Marvel Equipment Company, Chicago
Massey Concrete Products Company, Chicago
Master Builders Company, Cleveland, Ohio
Midwest Forging & Mfg. Co., Chicago
Modern Railroads Publishing Company, Chi-
cago
Mine Safety Appliances Company, Pittsburgh,
Pa.
Morrison Metalweld Process, Inc., Buffalo,
N. Y.
Murdock Manufacturing & Supply Co., Cin-
cinnati, Ohio
Nordberg Manufacturing Company, Milwau-
kee, Wis.
Northwestern Motor Company, Eau Claire,
Wis.
Oliver Iron & Steel Corporation, Pittsburgh,
Pa.
D. W. Onan & Sons, Minneapolis, Minn.
Overhead Door Corporation, Hartford City,
Ind.
Oxweld Railroad Service Company, Chicago
P. & M. Co., Chicago
Petibone Mulliken Corporation, Chicago
Pocket List of Railroad Officials, New York
Power Ballaster division, Pullman-Standard
Car Manufacturing Company, Chicago
O and C Co., New York
Racine Tool & Machine Co., Racine, Wis.
Rail Joint Company, New York
Railroad Accessories Corporation, New York
Railroad Equipment, New York
Railroad Products Company, Cincinnati, Ohio
Rails Company, New Haven, Conn.
Railway Age, Chicago
Railway Maintenance Devices Company, Mor-
ton Grove, Ill.
Railway Purchases & Stores, Chicago
Railway Track-Work Company, Philadelphia,
Pa.
Reade Manufacturing Company, Chicago
Roseman Tractor Mower Company, Evanston,
Ill.
Rust-Oleum Corporation, Evanston, Ill.
Safety First Shoe Company, Holliston, Mass.
Sperry Rail Service, Hoboken, N. J.
Teleweld, Inc., Chicago
Templeton, Kenly & Co., Chicago
Thornley Railway Machine Company, Joliet,
Ill.
Timber Engineering Company, Washington,
D. C.
United Laboratories, Inc., Cleveland, Ohio
Warren Tool Corporation, Chicago

Woodings-Verona Tool Works, Chicago
Wooley Machine Company, Minneapolis,
Minn.
Worthington Pump & Machinery Corp., Hol-
yoke, Mass.

Must Keep Deming Rule In Rail-Water Tariffs

Railroads serving the Southwest will be required by the Interstate Commerce Commission to maintain the so-called Deming rule which provides that ocean-rail rates over routes from north Atlantic ports, via Gulf of Mexico ports, to Deming, N. M., shall apply as maxima on water-rail traffic from north Atlantic ports to Arkansas, Oklahoma, Texas and Louisiana west of the Mississippi river. The report is in I. & S. Docket No. 5391.

The proceeding involves the commission's investigation of railroad tariffs proposing to eliminate the Southern Pacific Steamship Lines (Morgan Line), which has abandoned operations and cancelled its rates, as a party to transcontinental tariffs. The present Deming rule, as published in tariffs of other water carriers, is based specifically on the Morgan Line's rates to Deming.

Thus, as the commission said, the proposed elimination of reference to the Morgan Line "would have the effect of canceling that line's ocean-rail rates to Deming as maxima in connection with those other water carriers, and instead of those rates to Deming being applicable, increased ocean-rail rates in effect from origin to destination would apply." The commission further explained that the Deming rule is published by ocean

carriers that do not, as well as by those that do, maintain rates to Deming.

The report requires cancellation of the suspended schedules without prejudice to the publication of the following rule on water-rail traffic: "If a rate or rates from the same origin to Deming, N. M., applicable via any steamship line to the Gulf ports, thence via rail beyond, published in (name of tariff or tariffs), makes or make a lower charge on any shipment than the rate published in this tariff, that lower rate (or the lowest of those rates if more than one rate) will be applicable to that shipment."

C.A.B. Summons Air Lines For Conference on Costs

The "necessity for an industry-wide passenger fare increase" and other "revenue producing possibilities, such as charges for meals and 'promotional' tariffs" will be among matters considered at an August 19 conference to which the Civil Aeronautics Board has invited the domestic certificated trunk air lines. Other matters listed for consideration include declining load factors, over-scheduling, cost reduction possibilities through consolidation of ticket offices, joint use of ground facilities and other types of cooperative arrangements.

More than 2,000 members of the families of Long Island shop employees visited the road's Morris Park, N. Y., shops during "Family Day" on July 29. The visitors were conducted on guided tours and treated to refreshments. One of the groups (right), is shown observing a repair operation in the electric car shop. Below, an 8-year old son of a turntable operator is learning how it feels to be a locomotive engineerman



The general purpose of the conference is to consider "various problems relative to passenger fares and air line costs." The C. A. B. announcement said it was called in connection with a board decision to defer action on the recent request of United Airlines for an increase in mail pay. It was also pointed out that several of the air lines have recently filed tariffs proposing increases of approximately 10 per cent in passenger fares; and that other mail-pay applications, in addition to United's, are pending.

"In connection with the adequacy of all temporary mail rates the board will continue to follow the financial status of the carriers closely," the announcement continued. It added that if progress in establishing permanent mail-pay rates cannot be made "with sufficient rapidity to meet the requirements of the carriers," the "necessary adjustment will be made in the temporary rate of air mail to the extent that the facts justify." Attention also was called to the board's current studies of the "feasibility and effect of separating the cost of carrying the mail from the so-called subsidy elements." These studies were called for by congressional committees investigating the air mail situation.

Railroad and Supply Executives To Honor S. O. Dunn at Fair

More than 400 railroad and railroad supply industry executives from all parts of the country have been invited to a testimonial dinner for Samuel O. Dunn, editor and publisher of *Railway Age*, at the Chicago Railroad Fair on August 16. In connection with the event, Major Lenox R. Lohr, president of the fair, announced that that day would be called "Kansas-Sam Dunn Day," in view of the fact that Mr. Dunn's family was among the original settlers in Pratt county in that state. The dinner will start at the Harbor View Restaurant on the fairgrounds at 6 p.m. Following it the party will see a performance of the pageant "Wheels A-Rolling." Ralph Budd, president of the Burlington Lines, is chairman of the committee in charge of arrangements.

1948-49 Officers of the Smoke Prevention Association

At the forty-first annual meeting of the Smoke Prevention Association of America, held at New York during June, the following officers were elected for 1948-49: President, William G. Christy, smoke abatement engineer of Hudson county, Jersey City, N. J.; first vice-president, W. E. E. Koepler, Pocahontas Operators Association, Bluefield, W. Va.; second vice-president, A. A. Raymond, superintendent fuel and locomotive performance, New York Central System, Buffalo, N. Y.; secretary-treasurer, Frank A. Chambers, chief smoke inspector, Chicago; sergeant-at-arms, Thomas P. Scully, vice-

president and superintendent, Chicago, West Pullman & Southern, South Chicago, Ill.; public relations director, D. A. Sullivan, engineer, Commonwealth Edison Company, Chicago.

Amends Bulwinkle-Act Rules

The Interstate Commerce Commission has amended its recently prescribed rules and regulations governing applications under section 5a of the Interstate Commerce Act, which grants anti-trust immunity for carrier rate-making procedures approved by the commission. The rules were prescribed in a July 6 order (see *Railway Age* of July 17, page 51); and the amendments, embodied in an order dated July 28, rewrite those sections which specify how applications for approval of agreements are to identify the applicants and participating carriers.

Congress Adjourns

The special session of Congress, which convened on July 26 and adjourned on August 7, took no action on pending transportation legislation. Its action on the "anti-inflation" program, on which President Truman based his call for the session, was confined to legislation restoring wartime consumer credit controls and increasing the cash-reserve requirements of Federal Reserve banks.

The adjournment resolution provides that both houses shall remain adjourned

Discuss Loss and Damage

Five industrial traffic managers, who have served as general chairmen of the National Management Committee's Perfect Shipping campaigns since their inception 12 years ago, and four railroad officers met with W. T. Faricy, president of the Association of American Railroads, at Chicago on August 5 to discuss possible means to reduce the railroad's \$18,000,000 annual claim bill. Those who attended the conference—in addition to Mr. Faricy—were:

Irving M. Peters, traffic manager, Corn Products Refining Company, Chicago.

E. A. Jack, general traffic manager, Aluminum Company of America, Pittsburgh, Pa.

T. C. Burwell, vice president, A. E. Staley Manufacturing Company, Decatur, Ill.

J. E. Bryan, general traffic manager, Wisconsin Paper & Pulp Manufacturers, Chicago.

General W. J. Williamson, western representative, Port of Boston Authority, Chicago.

W. A. Johnston, president, Illinois Central, Chicago.

J. W. Barriger, president, Chicago, Indianapolis & Louisville, Chicago.

J. D. Farrington, president, Chicago, Rock Island & Pacific, Chicago.

G. H. Minchin, vice president (operations), Atchison, Topeka & Santa Fe, Chicago.

until December 31, but it also provides that they may be reassembled before that time by joint call of the president pro tempore of the Senate, the speaker of the House and the majority (Republican) leaders of both branches. Meanwhile, President Truman has his Constitutional authority to call another special session at any time. Unless one or the other of these actions is taken to bring Congress back before the end of the year, all legislation pending at various stages short of enactment will die. This is because it will be a new Congress that assembles in January, 1949.

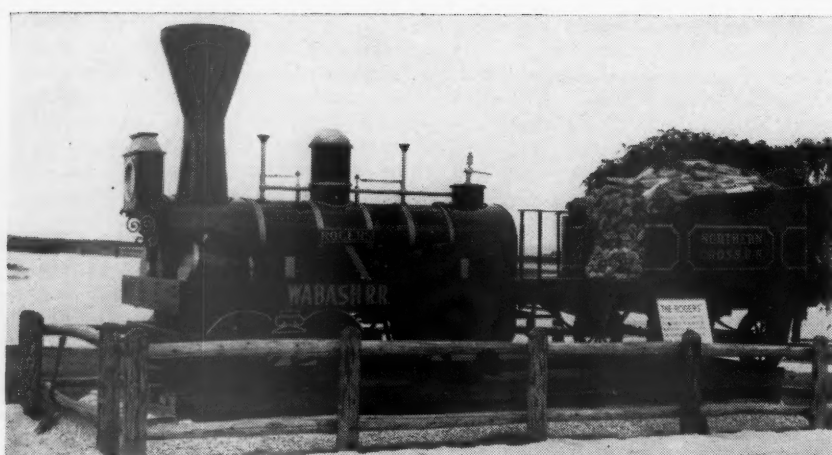
Except for the few additional measures that were introduced during the special session, the situation as to pending transport legislation remains what it was when the regular session adjourned on June 20 (see *Railway Age* of June 26, page 122). Bills introduced during the special session include H.R. 7135, sponsored by Representative Folger, Democrat of North Carolina, to repeal the Bulwinkle-Reed Act which grants anti-trust immunity for carrier rate-making procedures approved by the Interstate Commerce Commission; and H.R. 7061, introduced by Representative Rankin, Democrat of Mississippi, to authorize a \$5,735,000 appropriation for work on the proposed Tennessee-Tombigbee waterway. Also, three bills to increase, from \$15,000,000 to \$33,000,000, the amount of capital stock which the government-owned Inland Waterways Corporation is authorized to issue, and to authorize an \$18,000,000 appropriation for purchase by the Secretary of Treasury of the additional shares. These bills and their sponsors are: H.R. 7104, Representative Morrison, Democrat of Louisiana; H.R. 7106, Representative Reeves, Republican of Missouri; and S. 2912, Senator Wherry, Republican of Nebraska, for himself and a bipartisan group of 10 other senators.

Carriers, Union Informally Agree On Head-End Car Improvements

Steps taken by Senator Reed, Republican of Kansas, and Senator Meyers, Democrat of Pennsylvania, have resulted in an informal "understanding" between the railroads and the Brotherhood of Railway & Steamship Clerks under which the carriers have agreed to improve the condition of railroad express and baggage cars in which express messengers or baggagemen are required to ride.

The "understanding" came about as the result of conferences between a committee representing the carriers, headed by C. I. Clugh, assistant chief of motive power, Pennsylvania, and spokesmen for the union, headed by G. M. Harrison, grand president.

The conferences were suggested by Senators Meyers and Reed and subsequently arranged by the latter upon the conclusion of hearings earlier this year before a subcommittee of the Senate committee on interstate and foreign commerce on a bill to give the Inter-



ILLINOIS' FIRST LOCOMOTIVE REPRESENTED AT FAIR—On exhibition by the Wabash at the Railroad Fair in Chicago is a replica of the "Rogers," first steam locomotive to operate in Illinois and the West. The locomotive was the fourth built by Rogers, Ketchum & Grosvenor, of Paterson, N. J., and was listed on the books of that company as "Experiment" when completed on June 12, 1838. After a long sea and river voyage via New Orleans, the machine reached Meredosia, on the Illinois river, on September 6, and was placed in service two days later on the old Northern Cross (now Wabash). This was only a little more than eight years after common carrier railroading started in the United States.

Actual dimensions of the "Rogers" are not known, but it is believed to have been somewhat smaller than Rogers' first product, the famous "Sandusky." Historians estimate it weighed about seven tons

state Commerce Commission authority to prescribe safety and sanitation conditions for express and baggage cars. Senators Reed and Meyers, who were members of the subcommittee, were of the opinion that the matters complained of could be corrected through conference and negotiation and without additional legislation. A similar bill was reported to the House by its committee on interstate and foreign commerce.

In a letter of July 28 to Senator Reed, Robert Morgan, vice-grand president of the B. of R. & S. C., said it was agreed at the conferences that the union's request as to the "needed improvements" would be "fully complied" with, except as to proposed changes in doors and installations of diaphragms on existing cars with steel underframes. The railroads, he said, have agreed to launch the improvement program immediately.

"We may not have anticipated a more friendly and cooperative reception than was given us by the railroad committee," Mr. Morgan commented. "We were gratified and of course well pleased. If our understandings are translated into agreement form, we will have accomplished our objective."

Removes Expiration Date Of Express-Rate Increase

The Interstate Commerce Commission has authorized the Railway Express Agency to maintain "until further order of the commission" the increases in I.C.I. express rates which had previously been scheduled to expire October 25. The increases are those approved in the commission's September 25, 1947, report for a period of one

year from their effective date which was October 25, 1947 (see *Railway Age* of September 27, 1947, page 69).

Meanwhile the commission ordered further hearing in the proceeding (Ex Parte No. 163) which is now scheduled to be held on September 20 before Division 2 at Washington, D. C. The August 6 order removing the expiration date said that the further proceedings could not be completed by October 25.

"Progressives" Advocate Public Ownership, Make-Work Laws

Government ownership of the railroads and federal legislation establishing a 40-hour, 5-day week for non-operating employees and a 6-hour "day" with train-limit and full-crew provisions for operating employees, are promised in the platform of the Progressive Party which has nominated former vice-president Henry A. Wallace as its candidate for President. The platform, adopted at the party's recent convention in Philadelphia, Pa., also calls for repeal of the Bulwinkle-Reed Act, which grants anti-trust immunity for carrier rate-making procedures; the "abolition of discriminatory freight rates which help to keep the South and West in bondage to Wall Street"; and pledges "drastic amendment of the Railway Labor Act to make certain that railway workers enjoy genuine collective bargaining and the right to strike."

Other planks "oppose governmental strike-breaking through seizure of struck industries under the pretext of federal operation while profits continue to go to private employers"; and call

for "immediate repeal" of the Taft-Hartley Act, and enactment of a minimum wage of \$1 per hour. Still others advocate amendments to the Railroad Retirement Act to provide minimum pensions of \$100 per month with retirement after 30 years of service or at 60 years of age; and "urge the enactment and stringent enforcement" of federal and state laws "establishing adequate safety and health standards for . . . railroad workers . . ." Also, there are demands for "fair-employment-practices" legislation, and legislation abolishing segregation of persons of different races in interstate travel.

Unions Seek Full Hearing on Motion To Dismiss Permanent Injunction

Counsel for the three holdout operating unions this week asked the Court of Appeals for the District of Columbia to deny the government's motion to dismiss the permanent injunction which Justice T. Alan Goldsborough of the federal district court for the District of Columbia issued last month to restrain the brotherhoods and their leaders from staging a strike. As reported in *Railway Age* of August 7, page 45, the case went to the appellate court following the refusal of Justice Goldsborough on July 29 to dismiss the injunction.

The case, according to the unions, is not moot. They added, however, that should the appellate court decide to the contrary, the "proper procedure" would be to remand the case to the district court with instructions that the complaint be dismissed without prejudice.

HERE'S A RUN THAT GROSSES \$40 A TRAIN-MILE!

Only the simplest arithmetic is required to prove that the Deadwood Central System is the country's most prosperous railroad. Less than a mile long, its one train hauls, for a fare of 10 cents apiece, in excess of 300 passengers each time it traverses the grounds at the Railroad Fair in Chicago. An average of 12,000 persons have ridden the little train daily since the fair's opening on July 20, and the increasing business has required the addition of two more coaches.

At the close of business on August 9, the fair had been visited by 956,021 persons. The 1,000,000th customer—who passed through one of the turnstiles on August 11—was presented a set of the *Encyclopedia Britannica*. The largest previous week-end crowd was surpassed on Sunday, August 1, when there were 75,267 paid admissions to the grounds. A record week-day total of 53,408 customers passed through the turnstiles on August 5.

The excellent reception of the show has assured its extension at least through September. If attendance continues as at present, the fair may be held through October. Some thought is being given to its possible reopening next summer.

Action adverse to the brotherhoods, the unions stated, should not be taken in "summary fashion" upon the government's motion without the submission of briefs, oral argument and consideration of the entire record.

In support of their contentions, the unions — the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen & Enginemen and the Switchmen's Union of North America — held that only a "partial settlement" of the wages and rules dispute has been made, adding that there is "much" to be settled in future negotiations with the carriers. The settlement into which they entered, the unions said, was not "voluntary" in that they were under the compulsion of an injunction which restrained them from striking and exercising their full bargaining rights as employees.

Atlantic Monthly Discloses Railroad Survey Data

Thirty-eight per cent of a group of Atlantic Monthly readers who answered the question "Which form of transportation do you think the federal and state governments are helping?" indicated they thought the railroads are receiving such aid. The question was one of a series included in a questionnaire devoted entirely to railroads and recently mailed by the magazine to 2,340 of its subscribers. Results of the survey, which elicited 1,008 responses, a return of 43 per cent, were made public this week.

Eighty-eight per cent of the persons answering the question "How would you prefer to have our railroads operated?" said their preference was for private management. Government management was favored by 10 per cent of this group and 2 per cent wanted private management with government regulation. Negative answers were given by 46 per cent of those responding to the question "Do you think the railroads are doing their best to give good service?" The attitude toward railroad service was reported according to frequency of railroad travel and 49 per cent of those who use railroads "very often" answered the question in the negative, as did 45 per cent of those who use railroads "occasionally" and 46 per cent of those who use railroads "rarely or never."

Of the 916 replies to a question asking what the readers thought would be a fair return for the railroads on their net investment, 33 per cent said 6 per cent, 27 per cent said 5 per cent, 15 per cent said 4 per cent or less, 12 per cent said 10 per cent, 10 per cent said 7 per cent to 9 per cent, 2 per cent said 11 per cent to 19 per cent and 1 per cent said 20 per cent or more.

The accompanying table lists the percentages of those respondents selecting various methods by which the railroads could increase their earnings.

The presence on railroad boards of directors of representatives of banks,



More than 13,500 visitors passed through the exhibit of the Budd Company at the Railroad Fair in Chicago on July 20, the opening day. The sign is faced with the insignia of some of Budd's customers

financial institutions or insurance companies was thought to be in the public interest by 65 per cent of those expressing an attitude on the subject. Seventy per cent of those who answered the question about advertisements of the Association of American Railroads said they had read such ads recently. Ninety-five per cent of the readers indicating their choices as to which type of transportation is most important to the country's business chose railroads, 5 per cent chose truck lines, 2 per cent air lines and 1 per cent river and canal boats. (These percentages are based on 978 replies with 28 double answers.) Railroads were selected by 87 per cent of the group answering the question "In general, which do you think is the safest way to travel?" Seven per cent named the private auto, 6 per cent air lines and 2 per cent said bus lines. (These percentages are based on 974 replies with 10 double answers.) Of the 995 replies to a question whether the readers had ever turned to other forms of travel because of the difficulty of securing railroad accommodations, 40 per cent answered in the affirmative.

Method	Percentage of respondents selecting method*
Higher passenger fares	8
Higher freight rates	19
More aggressive selling, promotion and merchandising	77
More efficient operation and management	3
More efficient labor and working conditions	2
Better service and courtesy	3
Other (More passengers and freight, lower rates, government ownership, etc.)	1

*Based on 940 replies with some double answers.

Freight Car Loadings

Loadings of revenue freight for the week ended August 7 totaled 878,901 cars, the Association of American Railroads announced on August 12. This was a decrease of 15,480 cars, or

1.7 per cent, below the previous week, a decrease of 26,343 cars, or 2.9 per cent, below the corresponding week last year, and a decrease of 20,185 cars, or 2.2 per cent, below the equivalent 1946 week.

Loadings of revenue freight for the week ended July 31 totaled 894,381 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight	Car Loading	
For the Week Ended	Saturday, July 31	
District	1948	1947
Eastern	159,487	163,579
Allegheny	182,748	193,985
Pocahontas	73,073	72,594
Southern	133,236	129,812
Northwestern	138,822	143,202
Cent. Western	137,861	146,901
Southwestern	69,154	71,518
Total Western Districts	345,837	361,621
Total All Rds.	894,381	921,591
Commodities:		
Grain and grain pds.	66,337	71,603
Livestock	8,874	13,260
Coal	188,452	175,750
Coke	15,407	14,422
Forest pds.	53,936	50,507
Ore	77,985	84,070
Mdse. l.c.l.	101,886	113,588
Miscellaneous	381,504	398,391
July 31	894,381	921,591
July 24	882,566	919,928
July 17	892,527	919,735
July 10	755,760	807,117
July 3	757,366	629,204

Cumulative totals, 31 weeks 24,949,800 25,867,172 23,321,119

In Canada. — Carloadings for the week ended July 31 totaled 75,976 cars as compared with 78,433 cars for the previous week and 79,011 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
July 31, 1948 ...	75,976	32,218
Aug. 2, 1947 ...	79,011	35,819
Cumulative Totals for Canada:		
July 31, 1948 ...	2,296,485	1,067,470
Aug. 2, 1947 ...	2,254,852	1,136,311

Additional General News appears on pages 99 through 102.

SUPPLY TRADE

The appointments of John Thomas as manager of the American Locomotive Company's locomotive division, and of William G. Miller as manager of the Alco Auburn, N. Y., plant, have been announced. Both appointments are effective August 16. Mr. Thomas, who has been manager of the Auburn plant since 1941, will make his headquarters in Schenectady, N. Y., where he will take charge of engineering, purchasing, service, renewal parts and inspection phases of the locomotive division. In addition, Mr. Thomas will continue to supervise manufacturing departments of the locomotive division that are located at Au-

burn. His newly created executive office will be coordinated with the activities of Vice-President W. E. Corrigan, who is in charge of sales of the locomotive division, and of J. J. Smith, manager of the Schenectady plant. Mr. Miller transferred from Schenectady to the Auburn plant as assistant to the manager on March 1. Previously he had been assistant to Vice-President P. T. Egbert at Schenectady for three years.

Robert Watson has been appointed representative of the railway equipment division of the *American Welding & Manufacturing Co.*, with headquarters at Chicago. Mr. Watson was born in Scotland where he was educated and served an apprenticeship in locomotive construction and design. He came to the United States in 1923 and joined the Ingersoll-Rand Company as a machin-



Robert Watson

ist and shortly thereafter joined the American Locomotive Company as a draftsman. From 1925 to 1929 he worked as chief draftsman of the Erie at Cleveland, Ohio, after which he joined the Firebar Corporation as mechanical and sales engineer. He was appointed sales engineer and western sales manager for the Waugh Equipment Company in 1932 and in 1938 he joined Manning, Maxwell & Moore in the same capacity. Since 1941, Mr. Watson has served successively as assistant to the president and vice-president of Waugh Equipment.

C. B. Tavenner, assistant managing editor of *Railway Age*, has been appointed managing editor, continuing at New York, and Clair B. Peck, mechanical department editor of *Railway Age* and managing editor of the *Railway Mechanical Engineer*, has been appointed editor of the latter publication and of the *Car Builders' Cyclopedia* and the *Locomotive Cyclopedia*, at New York, each succeeding in these positions the late Roy V. Wright. Mr. Peck will continue as mechanical department editor of *Railway Age*. Harold C. Wilcox, associate editor of *Railway Age* and *Railway Mechanical Engineer*, will succeed Mr. Peck as man-

aging editor of the *Railway Mechanical Engineer* and will continue as associate editor of *Railway Age* at New York. Edgar L. Woodward will remain in charge of mechanical department matters in the western territory as western mechanical department editor of *Railway Age* and as western editor of the *Railway Mechanical Engineer* at Chicago. The growing importance of that territory has led to the recent addition of Gerald J. Weihs to the mechanical department staff at Chicago. Charles L. Combes, associate editor of *Railway Age* and the *Railway Mechanical Engineer*, has been appointed also managing editor of the *Locomotive and Car Builders' Cyclopedia*.

Mr. Tavenner was born at Paconian Springs, Va., on May 30, 1900, and in 1921 was graduated from the University of Virginia with the B.S. degree. For four years he was a research chemist with the Miller Rubber Company, Akron, Ohio, following which he taught chemistry in the Alexandria (Va.) high school until 1929. In that year he entered the publishing business as an editorial and sales representative of the Blakiston Company, publishers of scientific and medical books, with headquarters in Philadelphia, Pa. From 1933 to 1942 he was engaged in free-



C. B. Tavenner

lance editorial and literary work, contributing to periodicals and encyclopedias. In 1942 Mr. Tavenner joined the staff of *Railway Age* as an associate editor, with headquarters first in New York and then in Washington, D. C. In 1946 he returned to New York as news editor, being promoted in August, 1947, to assistant managing editor, in which post he continued until his present appointment as managing editor. He is the author of two books, "Brief Facts" (1936) and "Seeing California" (1948).

Allen W. Morton, vice-president and general manager of the piston ring division of the *Koppers Company*, has resigned. The piston ring division has been consolidated with the shops division, to form a new metal products

division to be operated in Baltimore, Md., under the direction of Walter F. Perkins, vice-president and general manager.

Franklin Wedge, formerly eastern manager of the *Ansul Chemical Company*, has been appointed assistant to the president and has transferred his headquarters from Philadelphia, Pa., to Marinette, Wis.

OBITUARY

Harold A. Brown, advertising manager of The Pocket List of Railroad Officials, died on July 1. He was 67 years old. Mr. Brown joined the organization in 1910 and was eastern representative until his appointment as advertising manager in January, 1937.

EQUIPMENT AND SUPPLIES

Budd Licenses Foreign Companies To Build Passenger Cars

The Budd Company has announced that Pressed Steel, Ltd., English manufacturer of automobile bodies and refrigeration equipment, has been licensed to build Budd-engineered railroad passenger cars. The English concern recently acquired a new plant near Glasgow, Scotland, which will be used to produce railroad cars. Before the licensing agreement was consummated, Budd constructed a model car, the "Silver Princess," to British specifications. This was the first British railroad car built entirely of stainless steel. Other foreign concerns building railroad passenger cars under licensing agreements with Budd include Carel Fouché in France and Piaggio & Co. in Italy.

FREIGHT CARS

The Reading is inquiring for 1,000 70-ton hopper cars.

SIGNALING

The Fort Dodge, Des Moines & Southern has ordered equipment from the General Railway Signal Company for an automatic interlocking to be installed at Kelley, Iowa. Controlled apparatus will be 5 signals and 2 electric switch locks. Type-SA searchlight signals, a Type-ME dwarf signal, Model-10 electric switch locks and Type-B plug-in relays will be used in this installation.

The Baltimore & Ohio has ordered equipment from the General Railway Signal Company for the installation of an electric interlocking at Roachdale, Ind. A 5-lever table interlocker will

control a switch machine and 9 signals. This order includes a Model-5C electric switch machine, Type-SA searchlight signals and Type-K relays.

LOCOMOTIVES

The New York, Chicago & St. Louis has ordered 13 1,000-hp. Diesel-electric switching locomotives at a total cost of approximately \$1,300,000. Nine of the locomotives will be built by Fairbanks, Morse & Co. and 4 by the Lima-Hamilton Corporation. Deliveries are scheduled to begin next December and to be completed in the following month.

ABANDONMENTS

Texas Electric. — Examiner Lucian Jordan has recommended in a proposed report that Division 4 of the Interstate Commerce Commission permit this road to abandon its entire line from Dallas, Tex., to Denison, 73.5 miles, and from Dallas to Waco, approximately 94.5 miles, and to abandon operation under a trackage rights agreement over approximately 5.6 miles of the Dallas Railway & Terminal.

Division 4 of the Interstate Commerce Commission has authorized:

Missouri & Arkansas.—To abandon its entire line from Neosho, Mo., to Wayne, 32.3 miles, and from Seligman, Mo., to Helena, Ark., 298 miles, including branch lines from Junction, Ark., to Eureka Springs, 2 miles, and from Freeman, Ark., to Berryville, 3.1 miles, subject to the condition that the line, or any portion thereof—including such tracks and other facilities and property of the applicant as may be essential to the continued operation of such line or portion thereof—be sold to any responsible party offering, within 60 days from the date of the commission's certificate, to purchase the property for continued operation and willing to pay not less than the net salvage value of the property which they may seek to acquire. The total net salvage value is estimated by the applicant at \$2,032,396.

At the same time, the commission also authorized the M. & A. to abandon operations under trackage rights agreements over (1) 0.79 mile of the Joplin, Mo., Union Depot; (2) the Kansas City Southern between Joplin and Neosho, approximately 18.5 miles; (3) the St. Louis-San Francisco between Wayne and Seligman, approximately 9 miles; and (4) 0.56 mile of the Illinois Central at Helena. The commission's findings are substantially the same as those recommended in a proposed report by Examiner A. G. Nye, as noted in *Railway Age* of March 20, page 103.

The road, which has been in the hands of three receivers, ceased operations on September 6, 1946, when, as reported in *Railway Age* of September 28, 1946, page 538, members of the Brotherhood of Railroad Trainmen walked out as the result of a wage dispute. Shortly after the filing of the

abandonment application, which was submitted 17 days after train operations had been suspended, the applicant's capital stock was sold by the Kell estate to a group "interested in the abandonment of the line and salvaging of the property."

The commission found that although the abandonment will cause shippers some inconvenience and possibly financial loss, there appears to be no "insurmountable obstacles" to using motor carriers in rearranging their methods of operation. "We may not overlook the fact that they have been using those highways since operation of the line was suspended, although perhaps not in all instances by choice," the commission said. "The highway net within the area, while not as satisfactory as might be desired, is favorable, and there is a large number of common-carrier motor-truck and lines serving all communities of importance."

Noting that the condition of the road is such that the operation of trains is impossible unless it is rehabilitated at substantial expense, the commission said that both the former and present stockholders were unwilling to advance the funds necessary for such purposes for the reason that the traffic outlook did not warrant it.

FINANCIAL

Alleghany Corporation. — *Note.* — Acting upon the request of the Chase National Bank of New York, this company has asked the Interstate Commerce Commission for authority to modify the terms of a \$15,000,000 promissory note held by the bank so as to make the interest rate on that part of the principal which is secured by cash and government obligations one fourth of 1 per cent above the current discount rate of the Federal Reserve Bank of New York in each quarterly period. The normal interest rate on the loan is 2½ per cent but the agreement provides for a reduction to 1¼ per cent on any part of the principal which is secured. The secured portion now amounts to \$6,108,000, the collateral including approximately \$410 in cash and the remainder in government bonds. Alleghany told the commission that Chase requested the change since the bank felt that "in view of rising interest rates" it was not receiving "a fair yield on a substantial part of the loan." The note is dated June 1, 1945, and is due July 3, 1953.

Baltimore & Ohio. — *Acquisition.* — As a means of improving its line between Clarksburg, W. Va., and Weston, this company has been authorized by Division 4 of the Interstate Commerce Commission to acquire and operate two lines owned by the City Lines of West Virginia, an interurban electric railway. One segment extends from a point near Clarksburg to a point near Freeport, 5.8 miles, while the other ex-

tends 7.6 miles from a point near Jane Lew to Weston. Their operation had been abandoned by City Lines. In connection with the acquisition, the commission also has authorized the B. & O. to abandon two corresponding segments of 3.7 miles and 6.6 miles, respectively, between Clarksburg and Weston.

Central of New Jersey. — *Debt Adjustment.* — The Interstate Commerce Commission has set September 21 for hearing on this road's voluntary plan of debt adjustment filed pursuant to the provisions of the so-called Mahaffie Act, as reported in *Railway Age* of August 7, page 51. The hearing will be held at the commission's Washington, D. C., offices before Examiner J. V. Walsh. At the same time, the commission cancelled a hearing scheduled for the same date on the road's reorganization proceedings under section 77 of the Bankruptcy Act.

Great Northern. — *Trackage Rights.* — Division 4 of the Interstate Commerce Commission has authorized this company to acquire trackage rights over the Northern Pacific between Billings, Mont., and Hirsch, 3.1 miles. The arrangements will enable the G.N. to continue to serve an oil refinery which is being relocated at Hirsch.

Kansas, Oklahoma & Gulf. — *Lease.* — This road has asked the Interstate Commerce Commission to approve a 10-year lease dated January 1, under which it will continue to operate the properties of its wholly-owned subsidiary, the Kansas, Oklahoma & Gulf of Texas. A previous 10-year lease expired December 31 last.

Maine Central. — *Annual Report.* — Operating revenues of this company last year totaled \$23,460,988, an increase of \$2,845,690 over 1946. Operating expenses were \$18,378,282, an increase of \$1,499,792. Net income was \$1,054,882, an increase of \$557,473. Current assets at the end of the year amounted to \$6,667,079, compared with \$5,657,523. Current liabilities were \$5,108,573, compared with \$3,708,404. Long term debt was \$26,322,918, compared with \$25,203,504.

New York Central-New York, New Haven & Hartford. — *To Take Over Apartment* — The 12-story apartment building at 277 Park avenue, New York, which has been operated under lease by the 277 Park Avenue Corporation and is valued at more than \$6,000,000, is to be taken over by these companies, which will become joint landlords on October 1. The building company submitted unsuccessfully a proposal for the reinstatement of the original lease made in 1923 for 21 years with renewal options for two 21-year periods. The proposal, made on June 8, called for the payment in full of all rent arrears, estimated at \$450,000, which had accumulated during the

depression, provided the railroads would reinstate as of October 1, 1943, the provisions of the original lease. The railroads had consented in 1938 to a modification of the lease, which had involved payment of \$247,000 annually as ground rent, but in 1943, when the first term of the original lease expired, refused to grant a 21-year renewal and gave a five year interim renewal. The building company filed an involuntary petition in bankruptcy in 1931 and subsequent bond reorganization plans were consummated in 1938.

Virginian. — *Annual Report.* — Operating revenues of this company last year amounted to \$36,551,799, compared with \$24,788,095 in 1946. Operating expenses totaled \$21,894,573, compared with \$17,820,571. Fixed charges were 1,799,724, compared with \$1,816,539. Current assets at the end of the year were \$18,417,797, compared with \$13,614,015. Current liabilities were \$11,441,246, compared with \$7,249,291. Long term debt was \$59,632,755, compared with \$60,330,784.

New Securities

Applications have been filed with the Interstate Commerce Commission by:

Chicago, Rock Island & Pacific. — To assume liability for \$3,420,000 of series B equipment trust certificates, the proceeds of which would be applied toward the purchase of 8 4,500-hp. Diesel-electric freight locomotives at \$431,600 each, 5 1,500-hp. Diesel-electric switching locomotives at \$128,750 each, and 5 1,000-hp. Diesel-electric road switching locomotives at \$94,850 each, all to be acquired from the American Locomotive Company. The certificates would be dated September 15 and would mature in 20 semi-annual installments of \$171,000 each, starting March 15, 1949.

International-Great Northern. — To assume liability for \$1,640,000 of series AA equipment trust certificates, the proceeds of which will be applied toward the purchase of 4 4,500-hp. Diesel-electric freight locomotives at \$439,241 each, 3 de luxe passenger coaches at \$104,533 each, and 1 diner-lounge car at \$124,940. The locomotives will be acquired from the Electro-Motive Division of the General Motors Corporation and the passenger equipment from the Budd Company. The certificates would be dated September 1 and would mature in 10 annual installments of \$164,000 each, starting September 1, 1949.

Pennsylvania. — To assume liability, together with the Montour and Pittsburgh & Lake Erie, for a \$1,300,000 note which the Youngstown & Southern seeks commission authority to issue as evidence for a loan of like amount. Proceeds will be used to redeem \$1,300,000 in notes, of which \$950,000 bear interest at 4 per cent yearly and the remainder at 3½ per cent. The note would be dated September 15, would be payable in 14 semi-annual installments starting March 15, 1949, and would mature September 15, 1955. Its rate of interest would be determined by competitive bidding.

St. Louis, Brownsville & Mexico. — To

assume liability for \$1,580,000 of series AA equipment trust certificates, the proceeds of which will be applied toward the purchase of the following equipment:

Description and Builder	Estimated Unit Cost
2 mail and baggage cars (American Car & Foundry Company)	\$ 64,100
2 grille-coaches (A.C.F.)	104,600
6 de luxe passenger coaches (A.C.F.)	97,400
4 1,500-hp. Diesel-electric road switching locomotives (Baldwin Locomotive Works)	142,000
6 1,000-hp. Diesel-electric switching locomotives (Baldwin)	103,000

The certificates would be dated September 1, and would mature in 10 annual installments of \$158,000, starting September 1, 1949.

Seaboard Air Line. — To assume liability for \$4,200,000 of series D equipment trust certificates, the proceeds of which will be applied toward the purchase of the following equipment:

Description and Builder	Estimated Unit Cost
500 50-ton steel box cars (Pullman-Standard Car Manufacturing Company)	\$ 4,540
300 50-ton steel high-side gondola cars (American Car & Foundry Company)	3,582
100 50-ton steel low-side gondola cars (A.C.F.)	3,622
50 70-ton mill type gondola cars (Pressed Steel Car Company) ..	5,784
13 streamlined lightweight sleeping cars (Pullman-Standard) ..	125,625

The certificates would be dated September 1, sold on the basis of competitive bidding and would mature in 15 annual installments of \$280,000, starting September 1, 1949.

Division 4 of the I.C.C. has authorized:

New York, New Haven & Hartford. — To assume liability for \$4,050,000 of equipment trust certificates, the proceeds of which will be applied toward the purchase of equipment estimated to cost \$5,400,000, as described in *Railway Age* of July 24, page 112. The certificates will be dated August 1 and will mature in 15 annual installments of \$270,000, starting August 1, 1949. The report also approves a selling price of 98.32 with a 2½ per cent interest rate, the bid of Halsey, Stuart & Co., and associates, on which basis the average annual cost will be approximately 2.76 per cent. The certificates were reoffered to the public at prices yielding from 1.55 per cent to 2.9 per cent, according to maturity.

Dividends Declared

Atlanta & Charlotte Air Line. — \$4.50, semi-annually, payable September 1 to holders of record August 20.

Chestnut Hill. — 75¢, quarterly, payable September 4 to holders of record August 20.

Chicago South Shore & South Bend. — reduced quarterly, 15¢, payable September 15 to holders of record September 1.

North Pennsylvania. — \$1.00, quarterly, payable August 25 to holders of record August 18.

Pittsburgh, Youngstown & Ashtabula. — 7% preferred, \$1.75, quarterly, payable September 1 to holders of record August 20.

Rutland & Whitehall. — \$1.05, quarterly, payable August 15 to holders of record July 31.

Average Prices Stocks and Bonds

	August 10	Last week	Last year
Average price of 20 representative railway stocks	47.94	48.63	48.43
Average price of 20 representative railway bonds	89.96	90.46	89.66

CONSTRUCTION

Atchison, Topeka & Santa Fe. — This company has awarded contracts to the Ellington Miller Company, Chicago, for an extension of the Diesel shop in that city and to Sharp & Fellows Contracting Co., Los Angeles, Cal., for grading in connection with a line change west of Waynoka, Okla.

Baltimore & Ohio. — This road has awarded the following contracts at an estimated total cost of \$330,000: To George Vang, Inc., Pittsburgh, Pa., for reconstructing bridge 190/91 at Beman, Ill., bridge 213 at Friedens, Pa., and for masonry alterations and the construction of one new pier each at bridges 102, 105, and 108, South Brooklyn, Ohio; to A. S. Wikstrom, Inc., Skaneateles, N. Y., for track laying and surfacing and the erection of superstructures of bridges for the Elk Creek spur at Overfield, W. Va.; to C. F. Englehart, Inc., Pittsburgh, for the excavation for a new channel for Mill creek and the placement of filling and related work at Brighton, Ohio.

Chicago & North Western. — This company has awarded the following contracts for projects to be completed in cooperation with its own forces (estimated costs in parentheses): To Henry Danischewsky, for remodeling of passenger and freight station at South Milwaukee, Wis. (\$29,845); to S. N. Nielson & Co., for the construction of a Diesel locomotive shop at Proviso, Ill. (\$641,760); to Peter Kiewit Sons Company, for the construction of bank protection and the realignment of track at Verdigre, Neb. (\$102,505); and to Jutton-Kelly Company, for grading in connection with the construction of additional yard tracks at Milwaukee, Wis. (\$49,885).

The company's forces will install a locomotive water tank, electric pumping equipment and Nalco treatment feeder at West Bend, Wis., at a cost of \$23,800. They will also construct yard trackage and relocate and extend interchange track with the Green Bay & Western at Wisconsin Rapids, Wis., at a cost of \$28,889. Contracts are yet to be awarded for two additional projects, which are the construction of a new passenger and freight station at Palatine, Ill. (\$55,800), and the installation of two 3-drum, 250-hp. boilers for steam generating plant at the engine-house in Minneapolis, Minn. (\$213,675).

Chicago, Indianapolis & Louisville. — This company plans to request bids soon for the laying and ballasting of 3.8 mi. of new main line in connection with its Cedar Lake (Ind.) line change. Bids will also be requested for the replacement of seven truss spans of the Wabash River bridge at Delphi, Ind., with deck plate girders. It is contemplated

plated that the old piers and abutments be used, that seven additional piers be installed at mid-points of the trusses and that deck plate spans 75-ft. in length be placed in lieu of the through truss spans. The cost of this project is expected not to exceed \$250,000.

Chicago, Rock Island & Pacific. — This company has awarded the following contracts for improvement projects, the estimated costs of which are shown in parentheses: To Kiewit & Condon-Cunningham Co. of Omaha, Neb., for grading in connection with the reduction of the westbound grade for a distance of 1.6 miles near Letts, Iowa (\$195,253); and to the Uvalde Construction Company of Dallas, Tex., for grading, and to Armco Drainage & Metal Products, Inc. of Middletown, Ohio, for culvert work, in connection with the construction of five yard tracks north of Peach street in Fort Worth, Tex., to provide additional yard capacity for 317 cars (\$191,600). The road's own forces will install 63.4 mi. of automatic block signals between Brinkley, Ark., and North Little Rock, at an estimated cost of \$168,240.

Green Bay & Western. — This road plans to complete the construction this year of a concrete grain drier house, and the installation of one No. 8 Hess 1,000-bu. grain drier, in Green Bay, Wis., at an estimated cost of \$62,000. The contractor is the Nicholson Company, New York. In addition, the G. B. & W. expects during August to replace 4.5 mi. of 70-lb. rail with 90-lb. rail and about 8.6 mi. in October. The road replaced 6.9 mi. of the lighter rail during May of this year.

Louisville & Nashville. — This road has authorized the expenditure of an additional \$3,200,000 for improvements, the largest of which is the installation of centralized traffic control between Henderson, Ky., and Amqui, Tenn. (just north of Nashville), at a cost of approximately \$1,820,000. The distance involved is 136 miles. Improvements at Decoursey Yard, Ky., are expected to cost some \$685,000, and are part of a larger plan designed to expedite the movement of traffic, much of which is coal, through that terminal. Approximately \$500,000 is being spent in extending and rehabilitating spur tracks in eastern and western Kentucky to serve new coal mining operations. Bridge and other improvements on the 22-mi. Cumberland and Manchester branch in Knox and Clay counties, Ky., to permit the road to handle heavier power and long coal trains, will cost about \$238,000.

Louisville & Nashville. — The Interstate Commerce Commission has extended from September 1 to November 15 the time within which this road will be required to complete the construction of a 16.4-mile extension to its Rockhouse

Creek branch from a point near Duo, Ky. As reported in *Railway Age* of February 8, 1947, page 341, the commission at the same time authorized the Chesapeake & Ohio to construct a 22.5-mile extension to its Elkhorn and Beaver Valley subdivision from a point near Wayland. The authorized extensions will enable both roads to serve a new coal mine.

Minneapolis, St. Paul & Sault Ste. Marie. — This road has awarded the following contracts: to the Stahr Company, Minneapolis, Minn., for the construction of a Diesel servicing building at the road's Shoreham shops in Minneapolis, at an estimated cost of \$150,000; and to the Dunnigan Construction Company, St. Paul, Minn., for the construction of a reinforced concrete box culvert at bridge No. 359-B, near Albertville, Wis., the estimated cost being \$35,000.

Missouri Pacific. — This road plans to reconstruct at a different location a seven-panel, untreated, open-deck pile frame trestle, located at Earle, Ark. The 92-ft. bridge will be rebuilt as a 63-ft. structure, consisting of a 25-ft. steel beam span with creosoted ballast deck on concrete pile bents and 19-ft. concrete trestle approaches at each end. The grade is to be raised two feet. Cost of the job is estimated at \$27,600.

RAILWAY OFFICERS

EXECUTIVE

Walter J. Tuohy, whose appointment to the newly-created position of first vice-president of the Chesapeake & Ohio at Cleveland, Ohio, and at Huntington, W. Va., was announced in *Railway Age* of July 24, was born at Chicago on March 12, 1901. He was graduated from De Paul University School of Commerce (B.C.S. 1923) and received his LL.B. from De Paul University School of Law in 1929. Mr. Tuohy entered railroad service in 1917 as a clerk of the Illinois Central at Chicago, leaving the road in 1921 to become office manager of a hardware manufacturing plant at Chicago. In 1922 he went with the Pennsylvania as secretary to district passenger agent at Chicago, leaving railroading again in the following year to serve as a salesman for the Radio Coal Company at Chicago until 1924 when he transferred to the Wisconsin Lime and Cement Company's coal department, becoming manager of that department in 1926. Mr. Tuohy became manager, wholesale sales of Consumers Company and vice-president of Shippers Fuel Corporation (subsidiary of Consumers) in 1930, retaining these positions until 1939 when he became president of the Globe Coal Company at

Chicago. He returned to railroading in January, 1943, as vice-president of the Chesapeake & Ohio at Cleveland. During the period July 1-October 31, 1943, he was furloughed by the C. & O. to serve as associate deputy coal mines administrator for the Department of the Interior during federal possession of coal mines. Mr. Tuohy was serving as vice-president in charge of coal traf-



Walter J. Tuohy

fic and development, with headquarters at both Cleveland and Huntington, at the time of his current promotion. He will continue to supervise the work of coal traffic and development, and his duties will include full authority over the operations of the C. & O. during any temporary absence of the president of the road, subject to the control of the board of directors and the chairman of the board.

J. B. Nance, whose election as president and general manager of the Maryland & Pennsylvania at Baltimore, Md., was reported in *Railway Age* of



J. B. Nance

July 17, was born at Fort Worth, Tex., on September 12, 1905, and received his B.E. degree in civil engineering from Johns Hopkins University, Baltimore, in 1926. Mr. Nance entered railroad

service in the engineering department of the Maryland & Pennsylvania during the summer vacation in 1925. In September, 1926, he joined the Missouri Pacific Lines as a draftsman at San Antonio, Tex., and was promoted to instrumentman the following year, in which capacity he served until February, 1929, when he became assistant to reclamation engineer at St. Louis, Mo., transferring to Houston, Tex., in 1932. Mr. Nance left railroad service in June, 1937, to become engineer and special investigator with the Kirby Lumber Corporation at Houston. He was subsequently appointed land and tax commissioner, which position he held until September, 1940, when he re-entered railroad service as superintendent of the Maryland & Pennsylvania at Baltimore. He was elected vice-president and general manager in December, 1946, in which position he was serving at the time of his recent election as president and general manager.

E. J. Weber, whose election as vice-president of the Maryland & Pennsylvania at Baltimore, Md., was reported in *Railway Age* of July 17, was born on June 26, 1890, at Milwaukee, Wis., and attended public schools in that city and the University of Maryland. Mr. Weber began his railroad career with the Maryland & Pennsylvania on November 1, 1912, as clerk-stenographer in the office of the vice-president. On December 1, 1915, he was appointed



E. J. Weber

chief clerk to president and general manager and on June 1, 1917, assumed additional duties as car accountant. On April 1, 1927, he was appointed assistant to president, and was serving in that capacity at the time of his recent election. On January 1, 1929, Mr. Weber was also appointed assistant to president of the Canton railroad, which position he relinquished upon his election as vice-president of the Maryland & Pennsylvania.

R. L. Pearson, whose retirement (due to ill health) as vice-president, executive department, of the New York, New

Haven & Hartford at New Haven, Conn., was announced in *Railway Age* of August 7, was born on April 2, 1882, and was graduated from Swarthmore college in 1902. Entering railroad service as an inspector in the maintenance of way department of the New Haven in 1904, Mr. Pearson has served that road for more than 44 years. He was employed consecutively from 1904 as transitman; assistant engineer; track



Underwood & Underwood
R. L. Pearson

supervisor; New London division engineer; Providence division engineer; Central New England and Danbury division engineer; and New Haven division engineer; becoming maintenance engineer, lines west in 1921. In December, 1923, Mr. Pearson was promoted to engineer maintenance of way and in October, 1929, he was advanced to chief engineer at New Haven. He served as assistant general manager from June to November, 1931, when he was promoted to general manager. Mr. Pearson had been vice-president since February, 1933.

FINANCIAL LEGAL and ACCOUNTING

S. M. Butler has been appointed assistant general claim agent, Chesapeake district, of the Chesapeake & Ohio, with headquarters at Richmond, Va.

Carl G. Lehmann and **Alex J. Brady**, both assistants to the comptroller, and **George W. Oakley**, auditor of disbursements of the Erie, have each been promoted to assistant comptroller, with headquarters as before at Cleveland, Ohio. **George W. Thompson**, assistant auditor of disbursements, succeeds Mr. Oakley as auditor of disbursements at Cleveland.

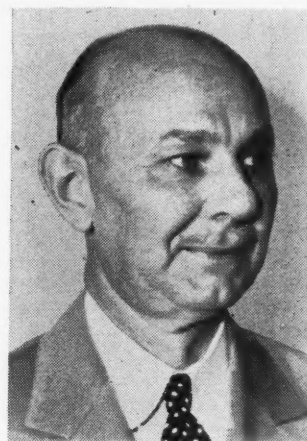
Harry F. Becker, whose promotion to auditor of freight accounts of the St. Louis Southwestern, at St. Louis, Mo., was reported in *Railway Age* of July 17, was born on August 17, 1894, at St. Louis. He entered railroad service with the St. Louis-San Francisco in 1910, and in 1918 he joined the accounting department of the Cotton Belt. Mr.

Becker advanced to traveling auditor in 1930 and to assistant auditor of freight accounts in 1944, the position he held at the time of his recent advancement.

F. E. Hewitt, assistant chief claim agent of the New York, Chicago & St. Louis, has been appointed chief claim agent, with headquarters as before at Cleveland, Ohio, succeeding **E. M. Mann**, deceased.

R. A. McGuigan has been appointed freight claim agent and **J. J. Marooney**, freight claim assistant, of the New York, New Haven & Hartford, both with headquarters at Boston, Mass.

Arthur E. Hoehle, whose promotion to auditor of disbursements of the St. Louis-San Francisco, at St. Louis, Mo., was reported in *Railway Age* of July 10, was born at St. Louis on June 29, 1893. He began his career with the Frisco as an office boy in 1910, subsequently serving in various clerical positions in the road's disbursements department. Mr. Hoehle was appointed



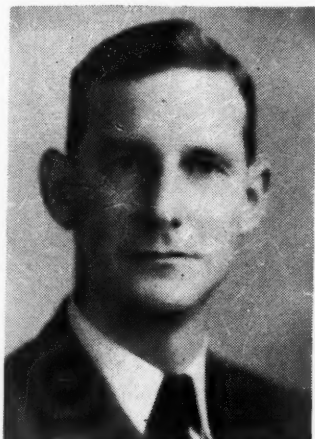
Arthur E. Hoehle

traveling accountant at Springfield, Mo., in 1917, and, following military service during World War I, he returned to the road in his last-held position. He advanced through successive positions to that of chief clerk, disbursements department, at St. Louis in 1937, and in 1940 was further advanced to assistant auditor of disbursements. He was serving in the latter position at the time of his recent promotion.

OPERATING

James J. Stockard, whose appointment as superintendent, Birmingham & Brunswick districts, of the Atlantic Coast Line at Manchester, Ga., was announced in *Railway Age* of July 3, was born at Raleigh, N. C., on January 3, 1904. He attended Davidson College from 1920 through 1921 and on February 3, 1922, entered the service of the Coast Line. After serving in clerical capacities at Rocky Mount, N. C., and Tampa, Fla., he became car distributor

in October, 1926, at Lakeland, Fla., and Tampa, becoming chief clerk to superintendent at Dunnellon, Fla., in the following year; yardmaster at High Springs, Fla., in January, 1928, and



James J. Stockard

general yardmaster at Tampa in February, 1928, being transferred to Lakeland in April, 1934, and returning to Tampa in July, 1940. Mr. Stockard was appointed trainmaster at Sanford, Fla., in October, 1940. In July, 1942, he was furloughed for service in the U. S. Army during World War II, returning to his post as trainmaster in May, 1946. On April 1, 1947, he was again furloughed, this time to work with the Rules committee of the Association of American Railroads. He returned to the Coast Line on May 20, 1947, as special representative. Prior to his present appointment, Mr. Stockard had served, since January, 1948, as acting superintendent at Manchester.

J. E. Coisse, conductor of the Cochrane division of the Canadian National has been appointed acting trainmaster of that division at Parent, Que.

A. S. McCann, assistant superintendent of the Southern Pacific at Oakland, Cal., has been promoted to superintendent of transportation, with headquarters at San Francisco, Cal. He succeeds P. D. Robinson, whose appointment as superintendent of the road's Rio Grande division was reported in *Railway Age* of July 24.

John O'Farrell, cost engineer of the Virginian, has been appointed assistant to general manager, with headquarters at Norfolk, Va.

F. L. Dennis, whose promotion to general superintendent of the Illinois Terminal, at St. Louis, Mo., was reported in *Railway Age* of June 12, was born on April 23, 1895, at Waverly, Ill. Mr. Dennis entered railroad service in 1913 as an operator-agent of the Chicago, Burlington & Quincy, later serving with the Chicago, Peoria & St. Louis and in the army during World War I. He joined the Illinois Terminal as agent

in 1921, and advanced to general agent in 1931, to general freight agent in 1941 and to superintendent of transportation in 1943. Mr. Dennis was serving in the latter capacity at the time of his recent appointment.

Wilbur Allen, safety supervisor of the St. Louis-San Francisco, at Tulsa, Okla., has been appointed terminal trainmaster at Memphis, Tenn. He is succeeded by James K. Beshear, formerly a conductor.

Carl L. Sauls, division superintendent of the Seaboard Air Line at Tampa, Fla., has been elevated to the post of director of property protection and supervisory training, with headquarters at Norfolk, Va. Mr. Sauls succeeds W. G. Slaughter, deceased. C. H. Lineberger, Jr., assistant superintendent, Carolina division, with headquarters at Charleston, S. C., succeeds Mr. Sauls as division superintendent at Tampa, while William J. Winfree, trainmaster at Orlando, Fla., succeeds Mr. Lineberger as assistant division superintendent at Charleston. Mr. Sauls was born in Raleigh, N. C., on April 25, 1887. He entered railroad service in 1905 as agent-operator of the Seaboard Air



Carl L. Sauls

Line, remaining in the service of that road during all of his subsequent career. He was appointed train dispatcher in 1907, became night chief dispatcher in 1912, chief dispatcher in 1914, and trainmaster in 1917, serving in this capacity until 1926 when he became superintendent. Mr. Sauls was appointed assistant division superintendent in 1928, and in 1942 was advanced to superintendent of the South Florida division at Tampa, the position he was maintaining at the time of his recent promotion. In his new capacity Mr. Sauls will have jurisdiction over the protection of the Seaboard's properties and will direct the supervisory training program.

G. A. Ossian has been appointed general transportation inspector, Western district of the Atchison, Topeka & Santa Fe, with headquarters at Topeka, Kan.

TRAFFIC

Eugene Mock, whose retirement as chief traffic officer of the Missouri Pacific Lines at St. Louis, Mo., was reported in *Railway Age* of July 24, was born on May 17, 1878, at Coatesville, Mo. He began his railroad career in 1895 as an agent-operator of the Keokuk & Western (now part of the Chicago, Burlington & Quincy) at Cambridge, Iowa, and subsequently held various positions with the Burlington, the St. Joseph & Grand Island (now part of the Union Pacific), the Choctaw & Northern, the Chicago, Rock Island & Pacific and the St. Louis & Gulf and the St. Louis Memphis & Southeastern (both now parts of the St. Louis-San Francisco). Following a brief period of service in the Frisco's auditing office in



Eugene Mock

St. Louis, Mr. Mock joined the Midland Valley as chief clerk to the traffic manager. In 1907 he became traffic manager of the Oklahoma Coal Operators' Association at McAlester, Okla., and in 1911 he returned to the M. V. as general freight and passenger agent at Muskogee, Okla. He advanced in 1916 to traffic manager. Mr. Mock entered the service of the M. P. in 1920 as assistant general freight agent, and advanced to general freight agent in 1924, to assistant freight traffic manager in 1927, to executive assistant to chief traffic officer in 1932, and to general freight traffic manager in 1944. He had served as chief traffic officer since June, 1946.

William Sutherland has been appointed district passenger agent of the Southern Pacific with headquarters at El Paso, Tex., succeeding H. D. McGregor who has retired.

Charles Kluiber, district freight agent of the Southern at Chicago, has been promoted to the newly created position of district freight and passenger agent, with headquarters at Minneapolis.

Charles R. Murray, general freight agent of the Canadian National, has been appointed assistant freight traffic

manager in charge of rates, tariffs, and divisions of the system, with headquarters as before at Montreal, Que. He is succeeded as general freight agent by **Charles L. McCoy**, whose former post as assistant general freight agent at Montreal has been taken by **George Douglas**. Mr. Murray was born in Nova Scotia and entered railroading in June, 1907, as an operator with the Canadian gov-



Charles R. Murray

ernment railways (now the Canadian National) there. After serving overseas in World War I he returned to railroading in July, 1919. In 1921, Mr. Murray transferred to the freight traffic department, where he served in varied positions before he was appointed assistant general freight agent at Toronto, Ont. In 1940 he was transferred to Montreal to assume charge of rates for lines from Armstrong, Ont., and West Fort William eastward, and remained at that post until June, 1945, when he was appointed general freight agent at Montreal, the position he held at the time of his current promotion.

The following have been appointed to the position of general agent on the Virginian: **J. A. Bazemore**, with headquarters at Wilson, N. C.; **W. J. Shields**, at Cincinnati, Ohio, and **H. M. Rand**, at Richmond, Va. **P. A. Doran** has been appointed general agent — freight department, with headquarters at Norfolk, Va.

Roy H. Kimble has been appointed district passenger agent of the Fort Worth & Denver City at Fort Worth, Tex.

H. C. Westbrook, whose promotion to assistant traffic manager of the Missouri Pacific Lines, at Chicago, was reported in *Railway Age* of July 24, first entered the service of the M. P. in 1922 as a stenographer in the traffic department. He served later in various capacities until April 1, 1930, when he was appointed coal traffic representative at St. Louis, Mo., subsequently being made commercial agent there. On April 1, 1940, Mr. Westbrook was advanced to district manager, perishable traffic, with headquarters at San Francisco, Cal.,

remaining there until November, 1942, at which time he accepted a commission in the army. Upon his return from military service in 1945, he resumed



H. C. Westbrook

his last-held post and served therein until January 1, 1946, when he returned to St. Louis as general freight agent. Mr. Westbrook was holding the latter position at the time of his recent advancement.

Earl B. Padrick, whose election to the chairmanship of the Trans-Continental and the Western Passenger Associations, at Chicago, was announced in *Railway Age* of July 31, was born at Chicago in 1902. He attended high school and business college at Omaha, Neb., and entered railroad service there in the passenger traffic department of the Union Pacific in 1920. In 1931, he was appointed assistant chief passenger



Earl B. Padrick

rate clerk. Six years later, Mr. Padrick went with the Trans-Continental and Western Passenger Associations, serving as chief of the tariff bureau. In 1944 he was promoted to vice-chairman of the associations, and during the war he acted as vice-chairman of the Western Military Bureau. Mr. Padrick, in his most recent promotion, succeeds the late **Hugh W. Siddall**, whose death was reported in *Railway Age* of July 17.

PURCHASES and STORES

T. P. Harris, purchasing agent for the western region of the Canadian National at Winnipeg, Man., has been promoted to general purchasing agent of the system, with headquarters at Montreal, Que. He is succeeded at Winnipeg, by **C. R. Snell**, who has been serving as assistant to vice-president at Montreal. **T. M. Pye**, purchasing agent at Halifax, N. S., has been appointed assistant to vice-president of purchases and stores at Montreal, succeeding Mr. Snell, while **W. M. Holmes**, assistant to general purchasing agent at Montreal succeeds Mr. Pye at Halifax, and **S. M. Smith**, secretary to chairman and presi-



T. P. Harris

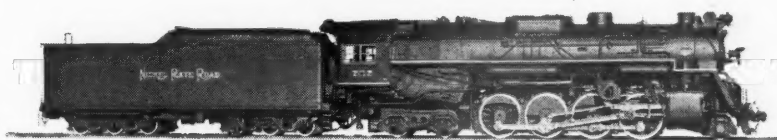
dent, returns to the purchasing department as successor to Mr. Holmes at Montreal. Mr. Harris was born in Bristol, England, on October 26, 1896, and was educated at Merchants Venturers Technical College in Bristol. He entered railroad service with the Grand Trunk in June, 1911, and remained with that road continuously, with the exception of 4½ years of service with the Canadian Expeditionary Force during World War I. On August 1, 1942, Mr. Harris went with the Canadian National as purchasing agent at Winnipeg, the position he held at the time of his current promotion.

ENGINEERING and SIGNALING

James L. Weatherby, whose promotion to signal engineer of the Texas & Pacific at Dallas, Tex., was reported in *Railway Age* of July 3, was born on December 27, 1914, at Dallas. He attended Texas Agricultural & Mechanical College during 1932 and 1933 and the University of Missouri in 1934 and 1935. Mr. Weatherby entered railroad service on September 16, 1935, with the T. & P., as assistant signalman in the construction forces, and was subsequently promoted to signalman. He was advanced to signal draftsman in the general offices at Dallas in September,

10 MORE

for the Nickel Plate



We have recently received an order for ten 2-8-4's from the New York, Chicago & St. Louis Railroad Co.

These locomotives will be similar to the 55 modern Lima's already in service on that road. They will carry a working boiler pressure of 245 lb., will have 69-inch drivers, and will develop 64,100 lb. initial tractive effort.

Modern steam locomotives like these will show a good return on their investment—and, with planned scheduling, can deliver more ton-miles of freight per dollar of investment than any other type of motive power.



DIVISIONS: Lima, Ohio — Lima Locomotive Works Division; Lima Shovel and Crane Division. Hamilton, Ohio — Hooven, Owens, Rentschler Co.; Niles Tool Works Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shovels; Niles heavy machine tools; Hamilton diesel and steam engines; Hamilton heavy metal stamping presses; Hamilton-Kruse automatic can-making machinery; Special heavy machinery; Heavy iron castings; Weldments.

August 14, 1948

1939, and between April, 1943, and February, 1944, he served in the army as signal supervisor and as commanding officer (captain) of Headquarters Company, 748th Railway Operating Battalion. Upon his release from the army, Mr. Weatherby returned to the T. & P. as signal draftsman, the position he held at the time of his appointment as signal engineer.

E. P. Weatherby, whose retirement as signal engineer of the Texas & Pacific at Dallas, Tex., was reported in *Railway Age* of July 3, was born in Troup, Tex., on October 8, 1876, and attended Baylor University in Waco, Tex., for three years. He received an M. E. degree from Texas Agricultural & Mechanical College in 1903, and was employed by the General Railway Signal Company in that year. Mr. Weatherby entered railroad service with the T. & P. as a signal maintainer at Fort Worth, Tex., in 1904, and in 1907 he was appointed signal engineer, the position he held at the time of his retirement.

C. B. Bronson, inspecting engineer of the New York Central, has been appointed assistant engineer maintenance of way — system, with headquarters at New York. The position of inspecting engineer has been abolished and the duties thereof will continue to be discharged by Mr. Bronson in his new capacity.

E. R. Schlaf, assistant to superintendent water service of the Illinois Central, with headquarters at Chicago, has been promoted to assistant superintendent water service, with the same headquarters, succeeding **J. P. Hanley**, who was retired from active service on July 31.

SPECIAL

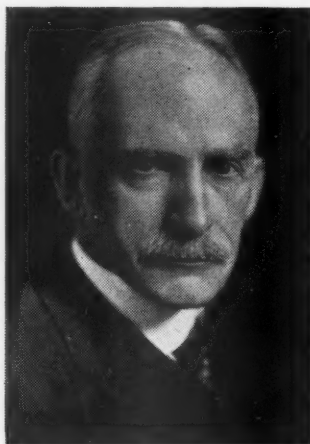
Richard S. James, formerly assistant superintendent of the Denver & Rio Grande Western, at Salt Lake City, Utah, has been appointed superintendent of safety and fire prevention — system, with headquarters at Denver, Colo. Mr. James' first name was incorrectly given as Howard in *Railway Age* of July 17.

Dr. F. W. Buooa has been appointed acting chief surgeon of the Eastern and Western Lines of the Atchison, Topeka & Santa Fe and the Panhandle & Santa Fe, with headquarters at Topeka, Kans.

OBITUARY

Louis S. Hungerford, retired vice-president of the Pullman Company, and of Pullman, Inc., whose death on July 25 was reported in *Railway Age* of July 31, was born on December 7, 1860, at Clockville, N. Y. He began his railroad career at the age of 18 as a sleeping car conductor on the Ogdensburg & Lake Champlain (now part of the New York Central System), later becoming

successively ticket auditor of the Denver & Rio Grande (now Denver & Rio Grande Western) and storekeeper of the Mexican National. In Decem-



Louis S. Hungerford

ber, 1886, Mr. Hungerford joined the Pullman Company. He advanced steadily to the post of general superintendent in 1904, to general manager in 1915 and to vice-president in 1920. He retired from the latter position in 1945 and was subsequently elected vice-president of Pullman, Inc., in which post he acted in an advisory capacity until May of this year, when he formally retired.

Ward J. Cable, district engineer of the Minneapolis, St. Paul & Sault Ste. Marie at Stevens Point, Wis., died on July 23, following an illness of three weeks. He was born at Gladstone, Mich., on July 14, 1904, studied engineering at the University of Minnesota and began his career with the Soo line in 1923 as a chainman. Mr. Cable was appointed rodman in 1926, instrumentman in 1929 and assistant engineer in 1930. He had served as district engineer at Stevens Point since June, 1935.

Clarence Richard Knowles, who retired in 1942 as superintendent of water service of the Illinois Central, at Chicago, and who was associated for 28 years with the Railway Engineering & Maintenance Cyclopedia in editorial capacities, died in his sleep at his home in Chicago on August 6. He was born at La Porte, Ind., on July 7, 1879, and attended Farrell's School for Boys, Hopkinsville, Ky., and took special courses in private schools and an International Correspondence Schools course in civil engineering. Mr. Knowles entered railroad service in 1900 as a water service repairman on the I.C., and in 1902 was promoted to water service foreman. Four years later he was appointed inspector of water service, advancing to general foreman of water service in 1912. He was further promoted to superintendent of water service in 1916, which post he held at the time of his retirement from railroad service. Mr. Knowles had been active in the

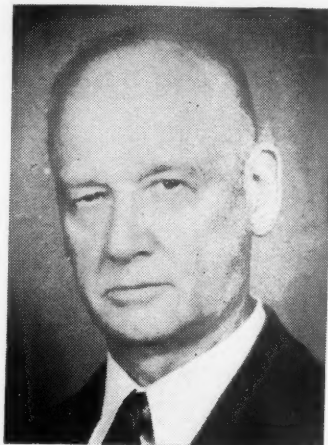
American Railway Engineering Association, of which he was a director from 1930 to 1933, chairman of the Water Service committee from 1922 to 1930 and chairman of the Maintenance of Way Work Equipment committee from 1931 to 1937. He was president of the American Railway Bridge & Building Association in 1921 and 1922. He served as associate editor of the 1948 edition of the R. E. & M. Cyclopedia until shortly before his death.

Carl H. Jackson, general livestock agent of the Atchison, Topeka & Santa Fe at Fort Worth, Tex., died at his home in that city on July 16.

R. I. Colnin, who retired as assistant general freight agent of the Chicago, Rock Island & Pacific at Des Moines, Iowa, in 1941, died in that city on August 4.

W. G. Slaughter, director of property protection and supervisory training of the Seaboard Air Line at Norfolk, Va., died on July 27.

Harry Stockman Marx, vice-president and general counsel of the Railway Express Agency at New York, died on August 6 after a short illness. Mr. Marx was born in Coshocton, Ohio, on August 16, 1878. He was graduated from Northwestern University Law School in 1902, and practiced law in Chicago until 1909, when he came to New York to join the law department of Wells Fargo & Co. Express. In 1914 he was appointed general attorney for

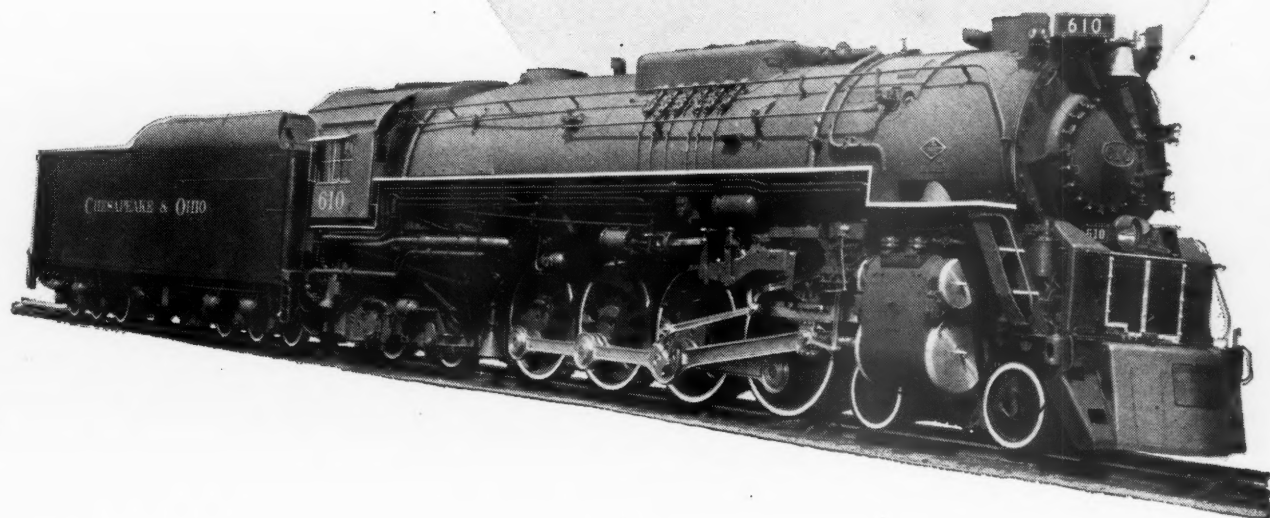


Harry S. Marx

Wells Fargo, and remained at that post when the various express companies were consolidated as the American Railway Express Company in July, 1918. Mr. Marx was appointed assistant general counsel in October, 1919, and three years later was promoted to general counsel. When the railroads acquired the express company on March 1, 1929, Mr. Marx was appointed vice-president and general counsel of the newly-organized Railway Express Agency, Inc., with jurisdiction over the agency's law department.

81,800 lb. *Tractive Effort*

FOR PASSENGER SERVICE!



THE Chesapeake and Ohio believes in starting passenger trains fast. This takes tractive effort. And they know, from their experience with more than 200 other Booster-equipped locomotives, that the Booster will give them the extra power needed for prompt get-away.

Consequently the five 4-8-4's being delivered by Lima-Hamilton this month — as well as other new and recently modernized C & O locomotives — are equipped with Boosters. These 4-8-4's have an initial tractive effort of 81,800 lbs. — about the highest we know of for strictly passenger service. The Booster provides 12,400 pounds — or 18% of the starting effort of the main engine.

**Equipped
with
Boosters®**



FRANKLIN RAILWAY SUPPLY COMPANY

A CORPORATION

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

August 14, 1948

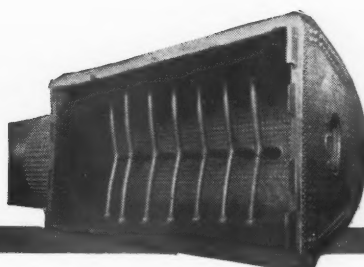
89

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE AND SIX MONTHS OF CALENDAR YEAR 1948

Name of road	Av. mileage operated during period	Operating revenues				Maintenance of way and equipment				Operating expenses			Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income
		Freight	Passenger	Total (inc. misc.)	Total	Way and structures	Equipment	Traffic	Trans- portation	Total						
Akron, Canton & Youngstown.....	June 171	446,655	90	465,755	468,224	75,212	54,075	137,758	134,042	325,512	69.9	140,243	38,675	79,875	54,282	54,282
Akron, Canton & Youngstown.....	6 mos. 171	2,768,926	413	2,885,122	2,885,122	408,689	284,741	1,375,588	1,343,455	3,019,043	62.7	1,076,120	401,793	544,971	434,140	434,140
Atchison, Topeka & Santa Fe System.....	June 13,081	39,173,351	5,047,051	47,895,362	7,084,285	7,154,080	7,154,080	959,472	15,813,480	32,740,070	68.5	15,105,292	6,932,247	7,887,064	3,375,590	3,375,590
Atchison, Topeka & Santa Fe System.....	6 mos. 13,081	200,707,312	25,494,253	247,411,256	38,356,977	43,642,188	5,748,281	5,748,281	90,584,201	188,423,031	76.2	58,989,252	30,480,935	28,223,145	22,019,328	22,019,328
Atlanta & St. Andrews Bay.....	June 82	201,728	2,101	211,256	29,204	15,456	6,977	114,150	51,538	114,150	52.6	97,106	40,576	19,622	40,576	19,622
Atlanta & St. Andrews Bay.....	6 mos. 82	1,154,842	7,585	1,204,562	135,318	88,121	37,002	305,410	635,599	635,599	52.6	570,963	210,164	235,682	159,273	159,273
Atlanta & West Point.....	June 93	274,358	46,543	367,099	52,324	46,847	13,553	173,244	173,244	307,094	83.7	59,494	28,094	15,705	12,932	12,932
Atlanta & West Point.....	6 mos. 93	1,716,301	314,809	2,304,998	231,977	306,702	82,337	1,107,936	1,107,936	1,861,616	80.8	443,382	211,892	105,369	48,063	48,063
Western of Alabama.....	June 133	2,824,198	43,352	2,867,550	44,895	314,413	13,476	159,248	159,248	291,810	80.8	69,387	36,312	30,782	28,983	28,983
Atlantic Coast Line.....	June 133	1,700,918	309,076	2,226,386	229,014	314,413	13,476	159,248	159,248	291,810	80.8	69,387	36,312	30,782	28,983	28,983
Atlantic Coast Line.....	6 mos. 5,572	9,447,474	1,328,522	11,242,703	2,192,425	2,192,425	1,964,413	288,266	4,867,032	9,790,772	85.2	1,701,437	950,000	431,924	29,273	29,273
Atlantic Coast Line.....	6 mos. 5,572	57,423,119	11,012,567	73,832,874	12,519,063	11,264,734	1,773,317	30,383,326	59,021,538	114,964,116	79.9	14,811,336	7,050,000	5,634,247	3,008,846	3,008,846
Charleston & Western Carolina.....	June 343	416,795	4,977	432,905	72,770	76,824	14,543	14,543	173,191	348,390	80.5	84,509	35,000	30,588	3,157	3,157
Charleston & Western Carolina.....	6 mos. 343	2,469,498	23,259	2,661,229	461,488	462,382	85,616	1,039,885	2,108,331	2,598,032	77.1	453,595	190,000	198,314	219,081	219,081
Baltimore & Ohio.....	June 6,192	32,139,716	2,108,331	34,248,047	4,904,458	7,932,512	739,810	7,932,512	14,000,356	25,933,866	77.1	8,262,787	2,136,800	5,889,341	2,501,156	2,501,156
Baltimore & Ohio.....	6 mos. 6,192	170,723,525	11,242,703	192,900,872	22,460,997	39,202,512	4,143,882	83,447,238	157,283,551	284,355	86.2	35,606,255	14,227,976	20,281,849	16,613,229	16,613,229
Staten Island Rapid Transit.....	June 20	207,249	112,746	337,785	68,501	42,033	1,682	149,912	149,912	289,355	81.5	46,430	38,285	-10,885	-30,223	-30,223
Staten Island Rapid Transit.....	6 mos. 20	1,098,624	662,227	1,852,891	339,461	254,735	9,796	994,343	1,736,512	294,235	93.7	116,379	294,235	-266,887	-283,316	-283,316
Bangor & Aroostook.....	June 602	684,754	46,024	764,077	240,347	167,014	10,220	236,084	236,084	707,141	92.5	56,939	27,549	63,601	31,289	31,289
Bangor & Aroostook.....	6 mos. 602	8,251,635	267,334	8,732,869	1,438,517	1,193,437	48,462	2,362,997	4,842,462	6,302,372	60.7	3,430,527	1,455,819	1,889,942	1,169,164	1,169,164
Bessemer & Lake Erie.....	June 214	3,047,963	1,167	3,049,130	146,487	151,509	18,209	527,447	1,277,839	1,775,817	41.7	1,789,583	800,301	1,225,823	974,092	974,092
Bessemer & Lake Erie.....	6 mos. 214	10,964,070	7,216	11,070,055	992,809	2,922,790	110,172	2,840,837	7,053,627	9,897,459	63.7	4,016,558	2,462,409	3,298,525	3,218,710	3,218,710
Boston & Maine.....	June 1,757	6,047,060	1,210,670	8,018,410	1,132,163	1,158,163	91,274	2,979,517	5,727,442	71,4	71.4	2,290,968	657,786	1,330,954	443,811	443,811
Boston & Maine.....	6 mos. 1,757	35,413,698	6,958,376	42,372,074	8,002,986	9,860,937	585,257	19,586,559	36,965,296	36,965,296	79.3	9,647,266	3,270,984	3,270,984	2,985,929	2,985,929
Burlington-Rock Island.....	June 228	440,680	60,924	524,559	55,439	35,972	4,486	166,387	166,387	282,225	53.8	242,334	1,465	178,684	22,549	22,549
Burlington-Rock Island.....	6 mos. 228	1,812,314	308,886	2,236,918	311,915	226,979	27,881	872,747	1,557,113	2,428,868	69.6	679,805	61,041	333,872	48,932	48,932
Cambria & Indiana.....	June 35	129,237	.....	129,237	109,316	109,316	667	23,355	23,355	144,888	112.05	-15,588	62,628	45,159	39,224	39,224
Cambria & Indiana.....	6 mos. 35	665,117	665,195	1,330,390	665,395	665,395	131,536	1,330,390	1,330,390	2,660,780	132	-212,944	321,707	151,076	223,405	223,405
Canadian Pacific Lines in Maine.....	June 234	294,924	34,752	329,676	58,802	44,389	7,668	137,869	137,869	241,894	98.3	6,047	23,385	17,954	-42,973	-42,973
Canadian Pacific Lines in Maine.....	6 mos. 234	3,028,027	201,710	3,229,737	528,447	444,389	41,282	1,328,768	2,418,894	2,418,894	71.7	955,057	161,291	312,850	286,645	286,645
Canadian Pacific Lines in Vermont.....	June 90	150,624	10,230	176,853	44,119	31,779	5,580	139,704	139,704	228,088	129.0	-51,255	12,718	-101,846	-86,065	-86,065
Canadian Pacific Lines in Vermont.....	6 mos. 90	974,788	83,857	1,058,645	274,445	205,667	26,445	947,488	947,488	1,483,459	126.7	312,380	101,346	687,223	625,655	625,655
Central of Georgia.....	June 1,815	2,753,192	3,216,036	5,969,228	492,817	107,116	1,071,116	1,445,211	1,445,211	2,708,416	84.2	609,820	229,192	255,922	10,810	10,810
Central of Georgia.....	6 mos. 1,815	15,830,125	14,988,085	30,818,210	2,886,407	2,886,407	618,784	8,844,253	16,324,516	16,324,516	86.0	2,665,739	1,541,854	974,646	300,439	300,439
Central of New Jersey.....	June 417	3,084,598	3,887,529	6,972,127	1,855,660	1,855,660	59,914	1,674,484	3,348,968	3,348,968	88.6	443,633	226,298	217,335	209,333	209,333
Central of New Jersey.....	6 mos. 417	16,344,381	3,088,879	19,433,260	3,252,158	3,531,132	322,241	10,639,928	18,873,162	18,873,162	90.3	2,027,370	2,412,427	-2,324,840	-1,999,388	-1,999,388
Central of Pennsylvania.....	June 213	1,897,759	13,803	1,908,046	159,061	312,617	24,818	525,076	525,076	1,063,712	54.3	896,334	660	1,156,051	677,338	677,338
Central of Pennsylvania.....	6 mos. 213	9,882,179	108,745	10,000,924	800,563	1,913,219	140,779	3,268,581	3,268,581	6,464,282	63.3	3,741,664	407,513	4,924,758	3,874,062	3,874,062
Central Vermont.....	June 422	858,000	325,000	1,183,000	162,534	162,534	80,085	360,190	360,190	724,036	74.2	251,964	268,150	480,475	101,957	101,957
Central Vermont.....	6 mos. 422	4,603,000	3,250,000	7,853,000	800,251	839,903	80,085	2,229,205	2,229,205	4,173,191	79.5	2,665,739	1,541,854	974,646	300,439	300,439
Chesapeake & Ohio.....	June 5,076	28,805,960	1,058,673	29,864,633	4,214,864	5,343,187	637,121	10,118,131	21,633,128	21,633,128	68.9	9,765,718	3,568,123	6,563,204	4,070,608	4,070,608
Chesapeake & Ohio.....	6 mos. 5,074	146,381,794	5,158,883	151,540,677	23,228,381	30,329,342	4,477,080	58,392,450	123,933,307	123,933,307	78.2	34,494,749	18,132,597	19,343,171	23,760,731	23,760,731
Chicago & Eastern Illinois.....	June 909	2,189,596	297,022	2,761,099	398,573	544,472	97,818	1,092,822	1,092,822	2,272,243	82.3	488,786	111,923	260,548	56,861	56,861
Chicago & Eastern Illinois.....	6 mos. 909	12,536,922	1,706,425	15,795,967	2,042,927	2,897,212	564,598	6,759,120	12,986,684	12,986,684	82.3	2,793,123	1,119,100	1,045,493	280,872	280,872
Chicago & Illinois Midland.....	June 131	815,769	894	816,663	102,445	120,768	23,483	196,180	196,180	474,560	56.8	361,218	130,523	234,028	79,537	79,537
Chicago & Illinois Midland.....	6 mos. 131	4,173,367	5,195	4,178,562	520,449	745,237	148,159	1,119,179	1,119,179	2,742,970	64.2	1,531,273	673,427	871,131	67	

FOR EVERY TYPE OF LOCOMOTIVE BOILER



DESIGNED for any steam locomotive, whether coal or oil burning, Security Circulators are now in use in twenty-five different types, ranging from 4-4-2s to 4-8-8-4s. Installations run from three to nine Circulators each, according to the size of the locomotive.

In making such installations, either in new or in existing motive power, the Security Circulators are suitably proportioned to the size and type of boiler so as to give the best results in bettering boiler performance and increasing locomotive utilization.

SECURITY CIRCULATOR DIVISION

AMERICAN ARCH COMPANY INC.

NEW YORK • CHICAGO

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE AND SIX MONTHS OF CALENDAR YEAR 1948

Name of road	Av. mileage operated during period	Operating revenues				Operating Expenses				Operating ratio	Net from railway operation		Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Way and structures	Maintenance of equipment	Traffic	Trans- portation	Total		Net from railway operation	Railway tax accruals	1948	1947
Colorado & Wyoming.....	June 41	151,355	229,552	380,907	14,449	24,236	374	79,701	125,074	54.4	104,478	-9,160	114,256	30,859
.....	6 mos. 41	822,041	1,327,378	2,149,419	63,790	134,638	2,095	495,893	738,776	55.6	588,602	214,589	371,408	182,758
Columbus & Greenville.....	June 168	137,352	147,321	284,673	33,962	26,109	4,446	87,736	124,647	94.4	8,185	8,934	139,136	33,221
.....	6 mos. 168	875,307	942,406	1,817,713	212,258	153,994	29,399	289,370	784,162	93.2	158,244	85,975	101,967	-129,453
Delaware & Hudson.....	June 794	4,877,059	180,667	5,057,726	701,243	1,117,704	111,914	1,832,855	3,941,131	75.7	1,265,544	463,661	830,102	517,100
.....	6 mos. 794	27,559,474	928,554	28,488,028	3,438,389	6,440,968	913,923	11,375,328	22,754,359	77.7	6,514,117	3,245,281	3,398,196	3,673,455
Delaware, Lackawanna & Western.....	June 973	6,187,176	876,557	7,063,733	1,015,404	1,157,692	140,520	3,135,335	5,676,222	72.9	2,114,076	800,474	1,255,517	841,373
.....	6 mos. 973	36,022,803	5,137,753	41,160,556	5,252,947	6,901,348	846,767	20,366,643	34,835,859	77.8	9,938,125	4,793,529	4,664,247	4,038,342
Denver & Rio Grande Western.....	June 2,443	8,022,693	314,916	8,337,609	657,909	9,943,707	317,976	1,944,835	3,937,662	68.5	1,907,045	513,426	1,228,643	447,635
.....	6 mos. 2,443	28,566,608	1,358,771	29,925,379	3,627,835	4,908,567	811,048	11,369,220	22,196,519	70.4	9,319,159	3,464,555	6,167,128	3,116,920
Detroit & Mackinac.....	June 230	189,810	1,361	191,171	32,600	20,013	2,184	35,538	99,320	48.8	104,410	33,772	67,380	26,688
.....	6 mos. 230	975,073	5,703	980,776	195,000	119,430	8,167	210,150	579,788	55.3	468,596	177,700	284,524	201,611
Detroit & Toledo Shore Line.....	June 50	508,935	.....	510,034	55,948	39,190	11,978	155,134	272,508	53.4	237,526	60,607	77,518	41,965
.....	6 mos. 50	3,349,031	.....	3,349,031	289,723	232,057	72,835	1,013,418	1,640,103	48.7	1,724,575	489,314	567,451	520,216
Detroit, Toledo & Ironton.....	June 464	1,187,335	824	1,188,159	164,792	204,655	21,045	305,401	733,200	58.8	513,093	180,148	277,353	206,924
.....	6 mos. 464	7,000,225	4,421	7,004,646	833,005	1,582,879	126,501	1,949,935	4,705,966	61.5	2,942,123	1,139,824	1,529,111	1,640,567
Duluth, Missabe & Iron Range.....	June 571	2,833	12,263	15,096	897,793	465,432	6,467	1,461,773	2,592,995	40.9	1,651,621	3,210,455	2,108,515	1,790,434
.....	6 mos. 571	14,352,930	17,487,254	31,840,184	2,915,359	2,718,164	43,899	5,279,626	11,320,749	64.7	6,166,505	9,482,729	8,623,938	2,192,834
Duluth, Winnipeg & Pacific.....	June 175	299,000	1,800	300,800	85,151	40,916	3,423	123,797	257,867	85.1	45,133	6,748	5,466	-0,709
.....	6 mos. 175	2,249,000	7,900	2,256,900	407,236	281,934	20,412	929,141	1,672,532	73.3	609,268	182,204	134,890	88,564
Elgin, Joliet & Eastern.....	June 391	3,507,107	.....	3,507,107	4,194,081	534,236	24,187	1,317,770	2,242,069	53.5	1,952,012	627,221	1,029,560	474,111
.....	6 mos. 391	18,904,155	684,458	19,588,613	1,365,619	3,127,434	157,670	8,570,241	13,795,760	60.9	8,874,631	3,359,917	3,653,457	2,841,536
Erie.....	June 2,229	12,994,102	.....	12,994,102	2,022,485	2,427,483	306,311	9,703,728	10,957,527	74.1	1,645,152	1,945,152	1,711,602	884,523
.....	6 mos. 2,229	76,197,105	3,836,124	80,033,229	9,406,724	13,915,279	1,733,036	36,674,959	64,500,659	75.6	20,835,183	9,482,729	8,623,938	5,583,358
Florida East Coast.....	June 575	1,227,294	417,071	1,644,365	425,569	416,733	62,572	856,095	1,904,417	105.4	-97,382	-199,099	22,082	-232,703
.....	6 mos. 575	10,857,055	4,362,325	15,219,380	2,302,709	2,518,089	386,141	6,555,956	12,891,374	77.1	3,827,073	880,654	2,147,488	1,597,658
Georgia.....	June 358	685,947	34,005	720,000	126,280	102,160	26,768	359,223	640,809	83.9	127,829	24,424	106,889	103,034
.....	6 mos. 358	3,852,789	180,717	4,033,506	548,343	613,608	163,833	2,068,523	3,560,529	82.9	731,958	253,152	582,260	316,074
Georgia & Florida.....	June 408	1,226,820	1,312	1,228,132	35,403	33,138	12,239	103,891	212,436	85.8	35,045	14,083	1,484	-16,378
.....	6 mos. 408	1,265,820	10,372	1,276,192	351,433	189,415	71,960	556,737	1,218,856	93.0	92,337	98,656	-92,237	-81,047
Grand Trunk Western.....	June 972	3,803,000	190,000	3,993,000	740,159	694,750	59,480	1,885,750	3,563,327	82.8	739,673	-41,108	661,387	459,208
.....	6 mos. 972	21,871,000	958,000	22,829,000	3,784,120	4,436,514	340,464	11,511,153	21,017,617	85.7	3,498,383	1,326,419	1,300,600	2,260,811
Canadian Nat'l Lines in New Eng.....	June 172	176,000	3,900	180,000	35,900	27,635	2,663	126,535	274,609	140.8	-79,609	3,019	-111,596	-104,957
.....	6 mos. 172	1,051,000	38,900	1,089,900	386,184	366,794	16,102	776,705	1,480,390	125.8	-303,890	129,879	-637,461	-564,728
Great Northern.....	June 833	16,673,604	1,078,808	17,752,412	3,803,643	2,655,681	300,736	6,478,666	13,788,947	71.4	5,515,963	2,745,304	2,576,692	1,828,828
.....	6 mos. 833	76,186,513	5,626,933	81,813,446	18,081,124	16,377,398	1,903,743	37,202,193	77,055,758	86.3	12,243,006	3,591,931	7,421,227	7,103,605
Green Bay & Western.....	June 234	315,046	117	315,163	88,819	31,089	17,609	89,385	240,736	74.3	83,077	35,374	25,481	10,179
.....	6 mos. 234	1,759,051	258	1,759,309	389,819	186,993	109,748	529,692	1,303,955	72.5	493,656	241,958	155,488	161,981
Gulf, Mobile & Ohio.....	June 2,906	5,857,398	558,065	6,415,463	1,373,204	1,449,780	211,958	2,241,250	5,076,848	74.0	1,787,931	448,729	1,028,607	579,345
.....	6 mos. 2,906	32,387,398	3,036,137	35,423,535	6,588,805	6,588,805	1,335,432	12,870,089	29,405,219	75.2	9,701,912	3,734,379	4,058,155	3,686,779
Illinois Central.....	June 6,550	17,173,271	3,302,881	20,476,152	3,971,557	3,932,099	403,990	17,681,267	17,808,391	77.5	4,891,360	1,744,542	2,981,692	1,962,645
.....	6 mos. 6,550	103,702,359	12,169,151	115,871,510	20,216,527	22,342,103	2,473,036	48,005,164	98,471,303	76.2	30,811,371	15,441,954	13,564,533	13,029,826
Illinois Terminal.....	June 474	854,579	124,668	979,247	100,049	132,988	30,640	380,457	774,068	71.06	315,234	99,924	185,424	118,333
.....	6 mos. 474	4,955,248	720,025	5,675,273	861,461	800,687	174,111	2,326,500	4,403,819	69.93	1,894,026	814,562	907,902	807,430
Kansas City Southern.....	June 800	3,023,398	106,064	3,129,462	267,565	292,694	91,074	882,379	1,789,324	53.2	1,573,502	605,000	856,774	519,640
.....	6 mos. 800	17,773,271	594,990	18,368,261	1,567,732	2,315,707	493,418	5,567,279	10,655,434	54.0	9,062,195	3,553,000	4,760,303	3,333,042
Kansas, Oklahoma & Gulf.....	June 328	2,564,577	590,990	3,155,567	397,759	1,008	124,678	256,266	52.2	234,490	93,786	107,279	55,039	55,039
.....	6 mos. 328	27,877,399	5,647	27,883,046	2,818,089	329,527	97,733	756,267	1,518,827	53.9	1,296,262	541,372	507,200	574,738
Lake Superior & Ishpeming.....	June 156	429,213	62	429,275	70,396	41,724	1,654	106,208	229,418	42.3	312,568	128,841	186,960	159,605
.....	6 mos. 156	1,299,322	382	1,299,704	205,847	202,828	7,609	407,655	1,056,495	67.5	509,325	301,884	245,747	206,960
Lehigh & Hudson River.....	June 196	1,219,343	.....	1,219,343	245,762	36,308	7,338	189,574	36,504	70.5	91,279	36,504	34,129	20,999
.....	6 mos. 196	7,178,343	.....	7,178,343	1,115,310	1,115,310	48,290	632,906	1,203,976	70.0	515,405	205,108	158,748	152,999
Lehigh & New England.....	June 193	4,312,292	.....	4,312,292	84,735	84,735	1,248	243,813	451,839	51.8	452,896	105,613	213,537	134,537
.....	6 mos. 193	26,877,399	5,647	26,883,046	3,434,360	619,950	67,535	1,470,607	2,872,795	65.8	1,491,565	675,344	851,607	595,029
Louisiana & Arkansas.....	June 1,282	6,117,617	331,837	6,449,454	678,333	1,073,980	136,560	2,833,840	5,210,107	76.9	1,564,226	66,422	1,331,742	851,902
.....	6 mos. 1,282	34,917,517	1,986,837	36,904,354	5,254,095	6,182,400	839,165	16,139,165	31,955,210	51.9	7,049,349	2,380,786	3,321,931	2,910,662
Louisville & Nashville.....	June 4,550	16,041,988	33,396	16,075,384	1,937,291	1,937,291	244,074	7,593,526	5,563,556	55.1	4,763,270	3,062,181	3,338,365	1,490,800
.....	6 mos. 4,550	88,929,871	6,511,321	95,441,192	14,556,948	21,398,580	1,772,072	43,962,156	85,355,945	53.3	17,080,953	12,285,447	8,675,086	9,076,628

Table continued on next left-hand page

CARRYOVER In Steam Boilers *Increases Fuel Costs*

In its most violent form, water carryover into superheater units can increase fuel costs 100%.

Application of the *Elesco Steam Dryer System* is the best insurance against such losses.

Be convinced - install one or more.



THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, INC.

60 East 42nd Street, NEW YORK

122 S. Michigan Ave., CHICAGO

Montreal, Canada, THE SUPERHEATER COMPANY, LTD.



A-1912

Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • Steam Generators • Oil Separators • American Throttles

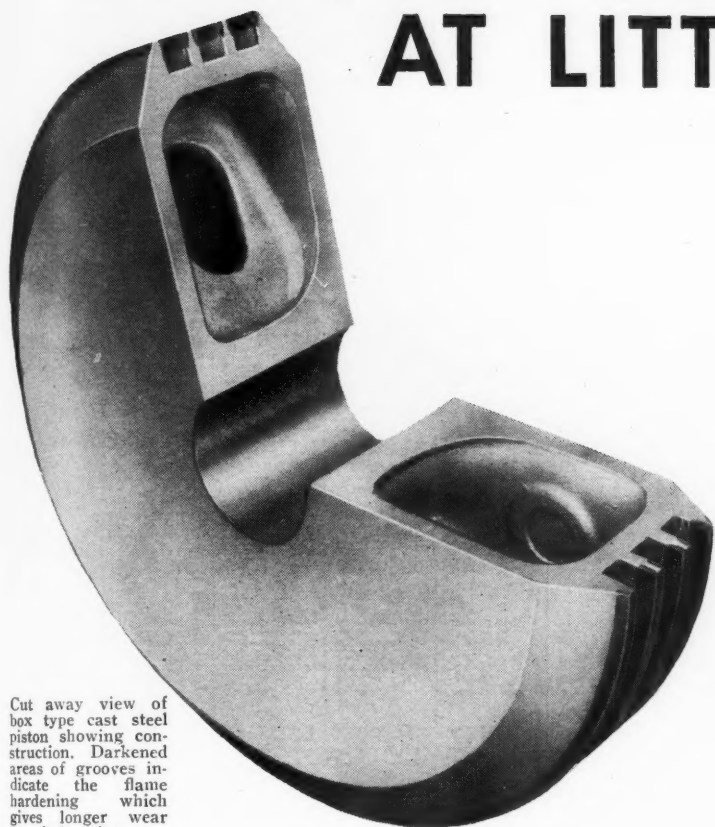
REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE AND SIX MONTHS OF CALENDAR YEAR 1948

Av. mileage operated during period	Name of road	Operating revenues				Maintenance of				Operating ratio	Net from railway operation	Railway tax accruals	Net railway operating income	
		Freight	Passenger	(inc. misc.)	Total	Way and structures	Equip- ment	Traffic	Trans- portation					
988	Maine Central.....	1,912,305	217,450	2,295,695	558,669	401,399	18,168	733,217	1,797,510	78.3	498,185	169,419	285,713	184,655
988	Midland Valley.....	11,804,676	956,652	13,597,029	2,472,675	2,457,104	103,451	5,156,515	10,586,895	77.9	3,010,134	1,294,378	1,341,314	1,106,463
334	Midland Valley.....	145,890	17	151,117	43,009	15,899	2,945	52,902	121,698	80.5	29,419	11,105	9,567	8,121
334	Midland Valley.....	985,793	80	1,010,831	220,494	114,612	17,769	324,199	720,642	73.2	290,189	136,521	107,324	133,423
1,401	Minneapolis & St. Louis.....	1,669,745	10,181	1,734,797	356,471	286,309	97,155	571,982	1,344,326	77.5	390,471	188,066	194,278	103,552
1,406	Minneapolis & St. Louis.....	8,993,045	47,671	9,357,829	1,686,094	1,606,686	603,037	3,318,458	7,731,983	82.6	1,625,846	973,182	640,959	906,770
3,225	Minn., St. Paul & S. Ste. Marie.....	2,630,602	116,083	2,832,433	641,310	476,707	58,433	1,151,596	2,427,820	82.8	504,613	39,681	460,202	165,054
3,225	Minn., St. Paul & S. Ste. Marie.....	13,421,489	531,555	14,946,627	3,434,786	3,112,850	354,120	7,130,880	14,045,318	98.0	301,309	1,156,244	-874,140	529,566
530	Duluth, South Shore & Atlantic.....	2,879,360	11,229	518,581	111,176	92,915	16,362	189,566	420,314	81.1	98,267	-3,593	82,333	45,776
530	Duluth, South Shore & Atlantic.....	2,889,446	57,193	3,094,980	553,620	557,937	96,198	1,256,704	2,526,174	81.6	568,806	140,770	339,046	207,496
152	Spokane International.....	110,288	462	121,410	36,941	20,697	3,673	53,236	124,235	102.3	-8,225	10,866	14,257	14,257
152	Spokane International.....	858,594	8,715	935,576	222,017	122,442	22,737	349,440	771,486	82.5	164,090	70,214	21,490	79,790
148	Mississippi Central.....	187,073	1,758	193,520	38,082	18,179	12,273	36,996	115,844	59.9	77,676	21,883	40,743	3,204
148	Mississippi Central.....	1,044,139	3,636	1,072,321	230,652	102,635	70,392	262,300	717,488	66.9	354,833	115,093	139,616	81,115
148	Missouri & Arkansas.....	1,224	9	1,087	2,518	.....	.....	214	11,863	100.	-12,950	2,133	-15,088	-12,416
172	Missouri Illinois.....	462,458	331	11,454	44,628	18,891	40	5,465	98,617	100.	-110,071	13,360	-123,445	-88,256
172	Missouri Illinois.....	2,309,184	428	465,269	68,672	41,531	6,423	115,299	238,406	51.2	226,863	80,517	129,030	53,764
172	Missouri Illinois.....	6,286,149	416,446	7,203,843	952,889	918,550	208,808	2,604,116	5,015,025	55.5	1,035,025	430,705	535,505	423,209
3,253	Missouri-Kansas-Texas Lines.....	3,283,201	2,114,979	37,566,244	5,104,135	5,146,052	1,289,795	15,491,458	50,105,225	69.6	2,188,814	636,138	1,182,518	411,997
3,253	Missouri-Kansas-Texas Lines.....	15,902,585	1,333,868	18,369,922	2,855,453	2,679,370	378,626	6,976,605	13,529,363	76.3	8,681,712	3,424,912	3,562,692	3,352,692
7,012	Missouri Pacific.....	85,193,142	6,553,658	103,693,426	15,263,553	16,897,440	2,327,677	43,092,166	102,922,555	78.4	4,840,559	1,017,953	2,993,451	890,130
1,719	Gulf Coast Lines.....	3,636,409	96,962	3,873,471	1,090,047	414,180	74,670	1,160,387	2,858,127	73.8	22,398,232	7,925,877	10,418,023	10,418,023
1,726	Gulf Coast Lines.....	23,924,366	529,303	25,383,190	4,905,952	2,598,944	459,895	7,889,066	16,555,361	65.2	1,015,347	273,766	494,609	233,231
1,726	Gulf Coast Lines.....	23,924,366	529,303	25,383,190	4,905,952	2,598,944	459,895	7,889,066	16,555,361	65.2	8,327,829	2,737,433	4,598,024	3,673,036
1,110	International-Great Northern.....	2,340,370	232,198	2,812,791	465,947	429,643	48,927	1,222,337	2,286,583	81.3	526,208	-39,837	423,642	134,737
1,110	International-Great Northern.....	13,550,222	1,140,736	16,193,598	2,827,282	2,486,307	299,978	7,716,298	14,061,920	86.8	2,131,678	683,906	474,432	249,593
170	Monongahela.....	745,798	704,424	751,853	904	368,748	10,350	1,233,211	2,082,262	52.5	1,886,506	553,053	663,860	1,052,568
170	Monongahela.....	3,933,231	6,544	3,968,768	439,426	368,748	711	81,041	186,560	65.0	100,305	67,501	90,674	63,333
51	Montour.....	286,443	.....	286,865	25,596	69,208	.....	.....	.....	.....	370,679	338,192	401,025	399,694
51	Montour.....	1,396,489	1,401,805	1,401,805	119,630	388,944	4,426	458,426	1,031,126	73.6	.....	.....	.....	.....
1,051	Nashville, Chattanooga & St. Louis.....	2,580,836	200,858	3,072,652	501,984	577,468	107,320	1,203,175	2,496,091	81.2	576,561	313,512	297,353	198,458
1,051	Nashville, Chattanooga & St. Louis.....	15,021,257	1,179,523	17,805,963	2,717,586	3,267,477	615,434	7,157,764	14,469,712	81.3	3,336,251	1,891,990	1,374,933	1,060,984
10,745	New York Central.....	50,293,720	11,834,608	69,098,294	10,586,089	13,266,701	27,719,226	55,553,305	80,479,222	80.4	13,544,989	2,722,198	9,246,485	3,930,997
10,745	New York Central.....	269,853,908	60,687,479	369,335,074	48,333,067	77,046,052	6,013,694	169,730,086	319,392,229	86.5	49,942,845	26,517,220	12,058,483	14,680,265
223	Pittsburgh & Lake Erie.....	4,012,170	89,835	4,279,923	459,313	886,858	62,740	1,285,424	2,864,050	66.9	1,415,918	712,593	1,456,971	779,579
223	Pittsburgh & Lake Erie.....	20,093,007	558,074	21,493,905	2,580,822	5,471,955	374,172	7,674,983	17,087,144	79.5	4,406,761	3,673,829	4,891,529	3,414,022
1,087	New York, Chicago & St. Louis.....	9,149,532	131,873	9,483,230	1,186,923	1,466,217	205,848	3,317,186	6,493,573	68.5	2,989,657	882,947	1,687,846	569,246
1,087	New York, Chicago & St. Louis.....	52,113,261	732,111	54,027,482	6,689,835	8,336,972	1,248,436	19,218,600	37,285,635	69.0	16,741,947	6,325,497	7,844,100	5,031,723
1,843	New York, New Haven & Hartford.....	8,601,046	4,888,516	14,890,272	2,022,327	1,928,275	260,373	5,743,833	10,852,253	72.9	4,038,019	852,000	2,276,188	860,619
1,839	New York, New Haven & Hartford.....	48,941,363	27,710,244	85,052,537	12,947,450	11,563,911	1,485,918	36,851,318	68,035,025	80.0	17,017,512	6,152,000	2,560,572	2,560,572
21	New York Connecting.....	216,550	.....	245,794	75,034	17,814	.....	.....	.....	.....	91,928	59,959	72,311	65,027
21	New York Connecting.....	1,362,636	.....	1,506,652	381,533	126,041	.....	.....	.....	.....	529,992	381,303	315,552	243,386
544	New York, Ontario & Western.....	588,575	10,222	637,457	125,309	106,942	32,490	315,260	611,530	93.0	45,927	-10,347	-23,872	-40,267
544	New York, Ontario & Western.....	3,604,656	32,904	3,935,973	694,919	681,200	179,853	2,164,830	3,906,946	99.3	29,027	250,430	754,361	437,186
120	New York, Susquehanna & Western.....	362,672	41,456	420,479	45,685	49,232	33,991	1,104,244	2,169,849	69.3	129,115	29,116	66,971	42,421
120	New York, Susquehanna & Western.....	2,242,720	265,113	2,608,560	287,196	267,642	33,991	1,104,244	1,850,854	71.0	757,706	219,463	177,766	176,920
2,129	Norfolk & Western.....	16,453,738	578,400	17,621,362	2,064,164	3,067,687	275,179	5,073,310	11,032,478	62.6	6,588,884	1,632,597	4,395,294	3,037,975
2,129	Norfolk & Western.....	82,548,039	2,775,172	88,625,004	11,114,045	16,542,890	1,560,706	28,260,354	60,583,989	68.4	28,041,015	16,257,197	17,949,580	17,416,513
726	Norfolk Southern.....	1,109,973	.....	1,135,082	223,374	103,800	39,176	380,170	802,944	70.7	332,138	147,756	140,959	83,759
726	Norfolk Southern.....	4,708,916	680,404	5,389,320	866,190	511,411	228,754	1,759,308	3,790,215	78.1	1,065,486	524,002	391,253	189,620
6,909	Northern Pacific.....	60,600,618	3,251,526	69,684,161	12,668,189	14,294,227	1,509,685	26,688,050	10,176,664	83.7	1,983,317	481,061	1,750,972	747,959
6,909	Northern Pacific.....	60,600,618	3,251,526	69,684,161	12,668,189	14,294,227	1,509,685	26,688,050	10,176,664	83.7	1,983,317	481,061	1,750,972	747,959
331	Northwestern Pacific.....	786,084	9,653	824,355	172,115	101,637	3,521	371,782	682,210	84.2	10,980,277	6,807,693	6,185,155	7,513,705
331	Northwestern Pacific.....	3,749,006	50,568	3,930,188	932,743	480,373	25,273	1,894,433	3,352,416	85.3	142,145	-6,174	104,705	44,299
331	Northwestern Pacific.....	3,749,006	50,568	3,930,188	932,743									

Pep up old power

AT LITTLE EXPENSE



Cut away view of box type cast steel piston showing construction. Darkened areas of grooves indicate the flame hardening which gives longer wear at vital points.

HUNT-SPILLER
Light Weight Cast
Steel Box Type
pistons with
Duplex Lip Type
Packing Improve
performance and
cut maintenance

Hunt-Spiller are exclusive railroad sales representatives for Double Seal Piston Rings made for Diesel and other services. Double Seal rings are cast from Hunt-Spiller Air Furnace Gun Iron.

“BORDERLINE” locomotives; serviceable, yet expensive to maintain and inefficient in performance; get a new lease on life by this treatment. Just install Hunt-Spiller box type cast steel pistons and Hunt-Spiller Duplex lip type packing rings. No need to change front and back cylinder heads when you do this. The old ones go back in place, so you make important savings there. From what others have told us, we know that you will be delighted at the results.

Why not get all the facts regarding this installation from your Hunt-Spiller representative? Or better yet, drop a line to Hunt-Spiller today. Hunt-Spiller Mfg. Corporation, 383 Dorchester Ave., Boston 27, Mass. In Canada: Jos. Robb & Co., Ltd., 4050 Namur St., Montreal 16, P. Q. Export Agents: International Ry. Supply Co., 30 Church St., New York 7, N. Y.

HUNT-SPILLER

LIGHT WEIGHT
STEEL PISTONS AND VALVES
DUPLEX SECTIONAL PACKING
AIR FURNACE GUN IRON

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE AND SIX MONTHS OF CALENDAR YEAR 1948

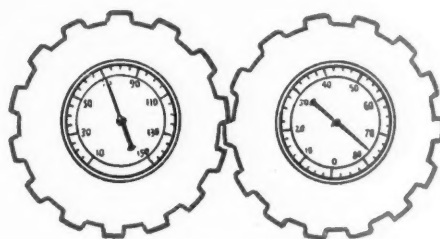
Name of road	Av. mileage operated during period	Operating revenues				Operating Expenses				Operating ratio	Net from railway operation		Net railway operating income
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Equipment	Traffic	Portation	Total		operation	tax accruals	
Pennsylvania-Reading Seashore Lines.....	June 388	558,512	304,944	1,012,915	92,587	101,809	10,873	634,586	900,975	97.9	21,530	43,734	1,047,012
Pittsburgh & Shawmut.....	June 380	3,317,950	1,472,525	5,018,715	1,257,781	724,354	10,137	3,437,113	5,706,181	113.7	687,434	578,593	1,620,626
Pittsburgh & West Virginia.....	June 97	1,335,004	.....	1,335,004	140,697	245,406	20,440	432,510	981,560	58.3	151,516	32,807	1,033,776
.....	June 97	1,535,004	.....	1,535,004	140,697	245,406	20,440	432,510	981,560	58.3	151,516	32,807	1,033,776
.....	June 135	1,780,722	.....	1,780,722	123,871	233,241	233,241	1,014,558	2,753,588	66.7	1,373,777	626,974	926,544
.....	June 135	3,973,472	.....	3,973,472	501,942	745,024	745,024	1,014,558	2,753,588	66.7	1,373,777	626,974	926,544
Reading.....	June 1,328	10,085,047	617,624	11,252,907	1,816,583	2,040,986	132,762	4,142,935	8,422,935	74.9	829,072	943,800	1,858,511
.....	June 1,328	55,600,346	3,922,160	62,906,969	9,998,433	11,807,573	719,361	25,206,347	49,832,905	70.2	13,048,074	6,260,292	6,465,445
Richmond, Fredericksburg & Potomac.....	June 118	1,306,028	463,395	2,016,801	291,482	1,318,191	131,810	518,456	1,855,560	77.2	460,241	148,125	247,580
Rutland.....	June 407	8,554,222	3,408,286	12,962,508	1,560,510	1,908,071	111,920	5,533,916	9,338,996	73.2	3,638,439	1,580,179	1,437,966
.....	June 407	3,654,475	29,503	3,683,978	473,845	83,980	13,127	2,634,090	2,778,282	95.9	19,325	28,864	31,257
.....	June 407	2,341,015	202,201	3,010,225	405,405	550,162	79,706	1,635,131	2,778,282	92.3	230,943	212,185	89,993
Sacramento Northern.....	June 269	174,516	.....	174,516	92,587	26,887	2,306	68,490	108,323	109.1	16,464	3,066	26,203
.....	June 269	938,014	.....	938,014	522,600	129,965	14,255	410,365	1,122,169	114.6	143,292	76,032	295,186
St. Louis-San Francisco.....	June 4,645	8,303,779	620,220	9,633,641	1,433,212	1,471,757	238,088	4,043,091	7,642,357	79.4	1,986,284	671,608	1,336,873
.....	June 4,645	46,606,996	3,654,397	54,443,462	8,297,147	8,959,833	1,491,417	24,149,150	45,303,858	83.2	9,138,604	4,992,794	4,554,823
St. Louis, San Francisco & Texas.....	June 159	2,130,404	83,807	2,331,243	285,736	220,853	96,659	1,077,336	1,742,412	74.7	140,697	38,613	67,922
.....	June 159	5,079,755	81,901	5,328,456	577,963	591,082	134,791	1,917,756	3,385,367	63.5	1,943,089	669,774	1,036,307
St. Louis Southwestern Lines.....	June 1,575	29,764,500	354,792	31,089,655	3,140,109	3,673,181	799,254	10,343,439	18,968,934	61.0	12,120,721	4,835,462	5,873,034
Seaboard Air Line.....	June 4,152	9,164,273	1,125,203	10,987,861	1,733,169	1,952,824	4,049,319	4,049,319	8,990,706	77.3	2,497,155	725,817	1,617,036
Southern.....	June 6,483	16,348,173	8,680,867	25,029,040	2,823,229	3,663,787	1,819,027	26,638,784	52,895,424	77.3	15,790,485	6,495,400	7,509,468
.....	June 6,483	102,209,558	9,936,458	120,387,827	16,395,729	21,414,948	2,120,922	46,596,828	91,108,632	75.7	29,278,995	13,245,867	13,728,164
Alabama Great Southern.....	June 316	1,251,441	124,046	1,495,371	202,054	292,246	29,928	487,649	1,068,520	71.5	426,851	290,105	191,884
.....	June 316	7,698,617	641,438	8,378,788	1,870,772	1,797,739	176,739	3,040,218	5,722,784	74.0	2,304,804	1,388,921	1,167,614
Cinn., New Orleans & Texas Pacific.....	June 337	3,101,042	186,644	3,434,889	491,912	609,181	59,694	1,034,798	2,322,808	64.7	1,212,081	609,896	723,714
Georgia Southern & Florida.....	June 397	480,201	1,215,590	19,920,020	2,340,850	3,569,367	338,497	5,937,622	12,880,291	65.0	6,939,729	3,525,555	4,077,171
.....	June 397	2,907,751	469,288	3,703,391	769,476	438,797	47,162	1,359,942	2,722,647	73.5	980,744	283,402	282,092
New Orleans & Northeastern.....	June 204	912,631	81,813	1,052,975	148,828	100,181	18,210	247,788	554,897	52.7	498,078	217,894	238,595
Southern Pacific.....	June 8,181	33,125,982	4,528,903	40,390,058	2,521,555	6,905,646	683,625	17,796,843	31,752,315	78.6	2,757,803	1,186,669	1,246,777
Texas & New Orleans.....	June 4,316	8,592,480	891,943	10,179,559	1,423,328	1,464,331	196,083	4,737,473	8,284,031	81.4	45,200,517	21,395,889	17,307,818
.....	June 4,316	54,343,219	4,823,250	63,301,504	8,126,822	8,813,181	1,207,583	25,088,320	46,009,004	72.7	17,292,500	6,783,653	7,324,960
Spokane, Portland & Seattle.....	June 945	1,811,992	88,797	2,023,980	469,027	236,688	18,928	729,887	1,548,360	76.5	475,620	47,366	300,965
Tennessee Central.....	June 286	10,651,686	536,195	11,946,986	2,835,539	1,400,933	114,426	4,359,906	9,235,747	77.3	2,711,239	921,778	959,240
Texas & Pacific.....	June 1,854	2,193,195	41,884	2,394,946	369,275	409,512	51,909	1,075,620	2,005,798	84.8	359,148	159,421	67,731
.....	June 1,854	32,544,230	2,864,685	38,102,536	4,848,134	5,773,998	963,852	15,406,517	28,709,558	75.3	9,392,978	3,502,851	3,880,154
Texas Mexican.....	June 162	223,791	.....	223,791	48,751	26,517	5,567	63,869	199,709	78.0	56,462	16,103	23,629
Toledo, Peoria & Western.....	June 239	382,130	dr	382,130	151,189	33,914	388,143	927,819	927,819	63.3	537,259	236,307	298,549
Union Pacific System.....	June 9,751	2,075,858	29,563	2,112,445	309,457	137,416	92,396	285,431	581,930	58.1	1,057,553	28,255	53,462
.....	June 9,751	27,299,379	4,059,153	34,302,863	5,509,468	5,369,141	714,834	11,695,956	25,373,614	74.0	7,157,737	2,633,078	2,633,078
.....	June 9,751	161,903,173	20,473,982	198,975,871	30,964,799	34,061,296	4,834,914	72,757,061	154,643,020	77.7	44,332,851	26,157,706	12,842,846
Utah.....	June 111	149,318	.....	149,318	31,710	682	57,801	146,051	146,051	97.8	3,300	6,627	13,312
Virginian.....	June 661	3,451,748	.....	3,451,748	881,028	197,254	386,664	3,566,338	880,742	100.0	286	74,641	23,544
Wabash.....	June 2,393	7,625,429	489,169	8,114,598	1,350,732	1,159,405	244,867	4,378,006	11,911,612	66.9	5,880,223	3,110,160	3,824,012
.....	June 2,393	45,255,761	2,648,035	51,370,689	6,948,982	6,945,310	1,501,112	20,254,144	37,556,828	73.1	13,813,861	5,377,278	5,926,579
Ann Arbor.....	June 294	734,513	3,897	762,935	95,907	140,055	22,237	281,799	556,364	72.9	206,571	67,127	123,623
Western Maryland.....	June 837	4,163,083	18,179	4,275,386	487,758	893,169	132,741	1,806,664	3,410,394	79.8	865,022	386,298	387,273
Western Pacific.....	June 1,195	20,704,990	71,268	21,447,708	2,656,552	394,700	1,139,846	7,149,846	15,102,787	70.4	6,344,921	2,901,000	4,021,298
.....	June 1,195	3,481,825	230,046	3,837,968	3,837,968	3,837,968	146,734	1,438,784	2,955,324	77.0	882,644	279,615	551,531
Wheeling & Lake Erie.....	June 505	3,346,274	4	3,359,584	486,323	445,723	62,127	955,458	2,024,571	57.2	1,515,013	715,221	927,168
Wisconsin Central.....	June 1,051	16,485,987	57,976	17,229,050	2,266,572	2,546,827	387,474	5,247,675	10,867,938	63.1	6,361,112	3,495,030	4,076,975
.....	June 1,051	13,338,671	230,943	14,502,366	1,778,586	2,181,576	339,681	5,923,408	10,705,126	73.8	3,797,240	1,185,969	1,971,235

Electro-Pneumatic Brake



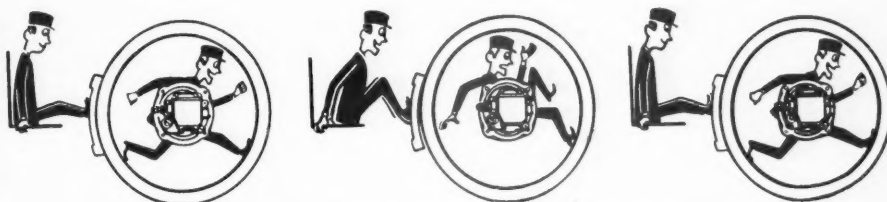
BRAKING IMPULSE TRANSMITTED TO EVERY CAR "IN A FLASH"

Speed Governor Control



MAXIMUM BRAKING PRESSURE "GEARED" TO SPEEDS

"AP" Decelostat



BRAKE PRESSURES MOMENTARILY "EASED" IN CASE OF WHEEL SLIP

WESTINGHOUSE HSC EQUIPMENT

gives a 3-Way Boost to Braking Efficiency

This modern equipment helps your trains to *make* time by *saving* time—improves schedules by bettering *average* speeds without increasing *top* speeds.

Braking pressure starts to develop on every car the moment the engineman applies the brake. Storage reservoirs are continuously recharged as air is used. Maximum retardation is assured by the Speed Governor Control which graduates maximum braking pressures to speeds, and by the "AP"

Decelostat which momentarily "eases" braking pressures on individual trucks if wheel slip threatens.

Experience with the "HSC" Electro-Pneumatic Brake has indicated that on the average 1,000 mile run, the running time can be reduced as much as one hour—with increased passenger comfort. Sixty minutes snipped off the schedule, with no rise in existing speed ceilings. The saving and service possibilities are obvious.



Westinghouse Air Brake Co.

WILMERDING, PA.



OPERATING REVENUES AND OPERATING EXPENSES OF CLASS I STEAM RAILWAYS

Compiled from 127 monthly reports of revenues and expenses representing 131 Class I steam railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF MAY 1948 AND 1947

	United States		Eastern District		Southern District		Western District	
	1948	1947	1948	1947	1948	1947	1948	1947
Miles of road operated at close of month.....	227,207	227,459	53,697	53,732	46,184	46,147	127,346	127,580
Revenues:								
Freight.....	\$666,984,176	\$591,923,438	\$264,844,312	\$230,147,562	\$146,735,910	\$129,181,658	\$255,403,954	\$232,594,218
Passenger.....	71,786,399	77,350,428	36,840,706	38,400,805	10,781,432	11,243,677	24,364,261	27,705,946
Mail.....	15,936,809	12,008,646	5,660,070	4,750,755	2,963,501	2,114,613	7,313,238	5,143,278
Express.....	7,543,110	10,378,732	2,820,150	3,287,658	1,361,097	2,114,751	3,361,863	4,976,323
All other operating revenues.....	34,152,317	33,726,504	15,620,195	15,454,465	5,558,188	5,684,347	12,973,934	12,587,692
Railway operating revenues.....	796,402,811	725,387,748	325,585,433	292,041,245	167,400,128	150,339,046	303,417,250	283,007,457
Expenses:								
Maintenance of way and structures...	113,424,595	102,623,946	41,939,976	36,538,121	23,022,609	22,059,220	48,462,010	44,026,605
Depreciation.....	10,382,881	10,120,713	4,410,331	4,323,931	1,815,368	1,726,025	4,157,182	4,070,757
Retirements.....	725,541	956,740	136,932	178,672	74,852	322,957	513,757	455,111
Deferred maintenance.....	* 392,973	* 338,887	* 291	* 23,182	* 75,884	* 17,829	* 316,798	* 297,876
Amortization of defense projects...	135,314	116,302	15,128	4,715	47,408	46,592	72,778	64,995
Equalization.....	* 3,609,505	* 3,625,158	* 1,998,597	* 1,956,117	* 303,425	* 752,088	* 1,307,483	* 916,953
All other.....	106,183,337	95,394,236	39,376,473	34,010,102	21,464,290	20,733,563	45,342,574	40,650,571
Maintenance of equipment.....	140,041,069	130,522,015	60,812,348	56,352,402	28,020,264	26,370,472	51,208,457	47,799,141
Depreciation.....	20,707,433	19,316,462	8,251,311	7,812,659	4,558,390	4,239,350	7,897,732	7,264,453
Retirements.....	* 165,946	* 52,641	* 8,679	* 11,007	* 12,110	* 10,039	* 145,157	* 29,595
Deferred maintenance and major repairs.....	* 273,764	* 619,138			* 142,408	* 402,227	* 131,356	* 216,911
Amortization of defense projects...	1,226,762	1,241,547	452,386	459,877	238,169	248,947	536,207	532,723
Equalization.....	331,421	78,005	67,351	193,004	437,176	144,774	173,106	29,775
All other.....	118,215,163	110,713,790	52,049,979	48,283,877	22,941,047	22,151,667	43,224,137	40,278,246
Traffic.....	16,028,950	14,535,425	5,561,108	4,985,265	3,411,933	3,148,137	7,055,909	6,402,023
Transportation—Rail line.....	314,744,703	279,933,109	134,556,522	122,007,629	60,956,163	53,200,027	119,232,018	104,725,453
Miscellaneous operations.....	9,988,018	10,090,412	3,990,915	3,878,018	1,282,280	1,504,477	4,714,823	4,707,917
General.....	22,003,929	19,912,939	8,513,740	7,689,305	4,781,988	4,338,496	8,708,201	7,885,138
Railway operating expenses.....	616,231,264	557,617,846	255,374,609	231,450,740	121,475,237	110,620,829	239,381,418	215,546,277
Net revenue from railway operations...	180,171,547	167,769,902	70,210,824	60,590,505	45,924,891	39,718,217	64,035,832	67,461,180
Railway tax accruals.....	75,966,674	76,893,850	32,205,057	26,929,661	21,897,171	19,543,336	21,864,446	30,420,853
Pay-roll taxes.....	21,712,154	28,835,578	11,952,748	12,048,291	4,469,949	5,696,475	5,289,457	11,090,812
Federal income taxes.....	28,136,689	24,862,690	10,340,990	5,993,575	12,062,673	9,058,174	5,769,026	9,810,941
All other taxes.....	26,117,831	23,195,582	9,911,319	8,887,795	5,400,549	4,788,687	10,805,963	9,519,100
Railway operating income.....	104,204,873	90,876,052	38,005,767	33,660,844	24,027,720	20,174,881	42,171,386	37,040,327
Equipment rents—Dr. balance.....	10,668,306	10,558,421	4,491,975	4,926,909	* 870,573	* 212,713	7,046,904	5,844,225
Joint facility rent—Dr. balance.....	3,358,501	3,499,132	1,683,707	1,656,486	505,592	501,233	1,169,202	1,341,413
Net railway operating income.....	90,178,066	76,818,499	31,830,085	27,077,449	24,392,701	19,886,361	33,955,280	29,854,689
Ratio of expenses to revenues (per cent)	77.4	76.9	78.4	79.3	72.6	73.6	78.9	76.2

FOR THE FIVE MONTHS ENDED MAY 1948 AND 1947

	United States		Eastern District		Southern District		Western District	
	1948	1947	1948	1947	1948	1947	1948	1947
Miles of road operated at close of month.....	227,223	227,529	53,698	53,731	46,161	46,211	127,364	127,587
Revenues:								
Freight.....	\$3,113,960,967	\$2,819,049,730	\$1,200,697,248	\$1,083,312,728	\$660,269,891	\$610,689,722	\$1,252,993,828	\$1,125,047,280
Passenger.....	368,636,892	372,396,739	187,278,117	184,035,422	62,198,261	65,099,939	119,160,514	123,261,378
Mail.....	76,165,092	57,770,686	27,095,228	22,079,435	13,819,287	10,275,937	35,250,577	25,415,314
Express.....	48,458,655	50,908,753	15,634,433	15,809,537	9,232,389	10,410,833	23,591,833	24,688,383
All other operating revenues.....	161,391,701	156,117,940	71,837,156	69,705,930	27,734,803	27,195,686	61,819,742	59,216,324
Railway operating revenues.....	3,768,613,307	3,456,243,848	1,502,542,182	1,374,943,052	773,254,631	723,672,117	1,492,816,494	1,357,628,679
Expenses:								
Maintenance of way and structures...	522,500,446	463,487,462	189,484,953	165,083,091	112,239,702	105,600,596	220,775,791	192,803,775
Depreciation.....	51,599,178	50,628,606	21,916,479	21,657,202	8,956,468	8,663,107	20,726,231	20,308,297
Retirements.....	4,042,151	2,663,543	901,561	649,977	431,784	624,373	2,708,806	1,389,193
Deferred maintenance.....	* 1,939,382	* 1,744,480	* 66,183	* 153,027	* 688,341	* 128,781	* 1,184,858	* 1,462,672
Amortization of defense projects...	977,841	517,113	62,331	37,717	218,954	159,074	696,556	320,322
Equalization.....	6,165,998	9,737,061	3,187,948	5,577,684	1,809,331	1,837,289	1,168,719	2,322,088
All other.....	461,654,660	401,685,619	163,482,817	137,313,538	101,511,506	94,445,534	196,660,337	169,926,547
Maintenance of equipment.....	690,750,436	630,298,595	294,733,694	272,094,061	138,623,148	128,211,872	257,393,594	229,992,662
Depreciation.....	101,027,215	95,191,414	39,764,499	38,518,352	22,430,428	20,772,074	38,832,288	35,900,985
Retirements.....	* 606,688	* 161,498	* 45,099	* 25,344	* 112,553	* 49,293	* 449,036	* 86,861
Deferred maintenance and major repairs.....	* 1,900,155	* 1,929,091	* 2,260,549	* 2,840	* 496,143	* 699,012	* 1,404,012	* 1,227,239
Amortization of defense projects...	6,174,585	6,252,055	2,260,549	2,335,475	194,811	1,248,020	2,719,225	2,668,560
Equalization.....	2,049,423	1,495,883	417,830	47,163	1,662,905	1,358,414	* 31,312	90,306
All other.....	584,006,056	529,449,832	252,335,915	231,221,255	113,943,700	105,581,669	217,726,441	192,640,908
Traffic.....	79,257,788	70,873,686	26,617,099	24,509,735	17,644,266	15,172,580	34,996,423	31,191,371
Transportation—Rail line.....	1,565,290,845	1,384,936,136	671,539,618	607,506,805	294,176,793	262,634,397	599,574,434	514,794,934
Miscellaneous operations.....	53,241,434	50,980,202	20,343,398	19,007,532	8,477,833	8,087,406	24,420,203	23,885,264
General.....	111,786,329	98,758,130	42,848,349	38,135,315	24,309,089	21,416,742	44,628,891	39,206,081
Railway operating expenses.....	3,022,827,278	2,699,334,219	1,245,567,111	1,126,336,539	595,470,831	541,123,593	1,181,789,336	1,031,874,087
Net revenue from railway operations...	745,786,029	756,909,629	256,975,071	248,606,513	177,783,800	182,548,524	311,027,158	325,754,592
Railway tax accruals.....	388,546,053	376,840,579	143,145,587	128,556,528	92,631,123	92,167,867	152,769,343	155,916,184
Pay-roll taxes.....	142,851,955	141,029,776	62,382,712	59,115,848	28,282,711	27,925,599	52,186,532	53,988,329
Federal income taxes.....	119,680,280	121,460,123	33,739,459	25,449,614	37,625,049	40,096,788	48,315,772	55,913,721
All other taxes.....	126,013,818	114,150,680	47,023,416	43,991,066	26,723,363	24,145,480	52,267,039	46,014,134
Railway operating income.....	357,239,976	380,269,050	113,829,484	120,049,985	85,152,677	90,380,657	158,287,815	169,838,408
Equipment rents—Dr. balance.....	54,269,149	50,287,836	26,279,689	25,266,129	* 3,687,327	* 1,378,157	31,676,787	26,399,864
Joint facility rent—Dr. balance.....	17,042,107	17,459,238	8,128,169	8,473,894	2,576,148	2,716,451	6,337,790	6,268,893
Net railway operating income.....	285,928,720	312,521,976	79,421,626	86,309,962	86,263,856	89,042,363	120,245,238	137,169,651
Ratio of expenses to revenues (per cent)	80.2	78.1	82.9	81.9	77.0	74.8	79.2	76.0

*Decrease, deficit, or other reverse item.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

General News

W. H. Dow to Receive A.S.M. Research Medal

Willard H. Dow, president of the Dow Chemical Company, has been selected to receive the American Society for Metals' medal for the advancement of research for 1948. Presentation of the medal will be made at the annual banquet of the A.S.M. to be held in Philadelphia, Pa., on October 28, during the National Metal Congress and Exposition.

New I.C.C. Account

Division 1 of the Interstate Commerce Commission has modified the Uniform System of Accounts for Steam Railroads by adding, in the road and equipment group, a new Account 59, Unapplied Material and Supplies—Equipment. The account will include the cost of unapplied materials and supplies located at the point of use which have been purchased specifically for the construction of new equipment.

Texas Intrastate Rates

The Interstate Commerce Commission has instituted an investigation into the refusal of the Railroad Commission of Texas to authorize railroads operating in that state to apply the Ex Parte 166 increases to intrastate freight rates on various commodities. The proceeding, instituted upon petition filed by the railroads, is docketed as No. 30024. It has been assigned for hearing at Austin, Tex., on September 13, before Examiner Myron Witters.

Representation of Employees

Four organizations, each functioning through the Railway Employees' Department, American Federation of Labor, have replaced the Pullman Car Employees Association of the Repair Shops and the Independent Pullman Workers Federation as the representative of carmen, machinists, blacksmiths and sheet metal workers, including their helpers and apprentices, employed by the Pullman Company, as the result of a recent election which has been certified by the National Mediation Board.

The carmen are now represented by the Brotherhood of Railway Carmen of America; machinists by the International Association of Machinists; blacksmiths by the International Brotherhood of Blacksmiths, Drop Forgers and Helpers; and the sheet metal workers by the Sheet Metal Workers International Association.

The board also has certified the Brotherhood of Railway Carmen and the International Association of Machinists as the respective representatives of carmen and machinists, including their helpers and apprentices, employed by the Alameda Belt, while that road's electrical workers and boilermakers, including their helpers and

apprentices, are now represented by the International Brotherhood of Boilermakers, Iron Ship Builders and Helpers of America and the International Brotherhood of Electrical Workers, respectively. The latter two unions also are affiliated with the A. F. of L. None of these Alameda Belt employees had been represented by any organization or individual.

As the result of other board action, the Railroad Yardmasters of America has been certified as the representative of yardmasters employed by the St. Joseph Terminal and the Des Moines Union, while the Brotherhood of Railway Clerks has been certified as the representative of clerical, office, station and storehouse employees of the Blue Ridge, the Carolina & Northwestern and the High Point, Randleman, Ashe-

boro & Southern. These employees also had previously been without representation.

Lists Water Rate Changes

The Interstate Commerce Commission has made public a "Statement Representative of General All-Water Freight Rate Changes Made During the Period January, 1940, to May, 1948, Inclusive." The statement, prepared by the commission's Bureau of Traffic, describes itself as a compilation which "shows increases made since 1940 in all-water rates of representative water carriers and is indicative of major rate changes made by carriers operating over the specified trade routes or waterways."

The form of the statement is like



LURIA STANDARD BUILDINGS

... the fast, economical solution to your industrial housing problems

LURIA industrial buildings are standard production-built units of heavy construction. Used individually or in combination, they adapt themselves to practically any desired plan.

Simplicity of design, with bolted frames, permits easy handling and low-cost erection. Rigid frame construction gives unobstructed working areas, with usable space all the way to the rafters.

A choice of collateral materials, type and location of doors and



windows, and many other optional features give complete freedom of building design and architectural treatment.

Write today for complete information.

- BASIC UNIT WIDTHS — 40' TO 100' CLEAR SPAN
- LENGTH — ADJUSTABLE IN INCREMENTS OF 20'
- CLEARANCE AT EAVES — 12' TO 20'

LURIA ENGINEERING CORPORATION

500 Fifth Avenue, New York 18, N. Y.

1734 Candler Bldg.
Atlanta 3, Georgia

Fidelity Philadelphia Trust Bldg.
Philadelphia 9, Pa.

Chamber of Commerce Bldg.
Boston 10, Mass.

First National Bank Bldg.
Chicago 3, Ill.



She has to take chances
... YOU CAN PLAY SAFE
And Reduce Repair Costs on High-Speed Diesels!

You play safe two ways when you install Porous Chrome* Piston Rings! You get new-engine performance. And you guard against the cost of disrupted schedules and frequent piston ring replacements. Many sizes of these amazing rings are now manufactured from F-88 Metal—a new centrifugally-cast iron with $2\frac{1}{2}$ times greater strength and a 50% higher modulus of elasticity. F-88 rings are unbreakable in service! What's more, Porous Chrome Piston Rings seat immediately, thus eliminating the costly wear of the break-in period. They reduce cylinder wear by half, and give you extra savings by eliminating the need for using chrome-plated cylinder liners.

Don't take chances! Take a tip from leading Diesel engine builders, who play safe with Koppers American Hammered Porous Chrome Rings. There is a piston ring combination, including the Porous Chrome compression ring, for any high speed engine—for new equipment or replacement jobs.

Koppers Company, Inc., Piston Ring Division
 Box 626, Baltimore 3, Maryland



IN EVERY SIZE • OF EVERY TYPE • FOR EVERY PURPOSE

**American Hammered
 Piston Rings**

*VAN DER HORST PROCESS

that of a previous one on major changes in rail and rail-water rates since October, 1914 (see *Railway Age* of May 22, page 57). The information is set up for easy reference in four columns, showing in turn the trade route or waterway involved, the years of the rate changes, the "representative" carrier making the change, and a general description of the change.

Heads C. of C. Committee

J. W. Evans of Evans & Co., Houston, Tex., has been appointed chairman of the Committee on International Transport of the Chamber of Commerce of the United States for the year 1948-1949. Mr. Evans, a member of the chamber's board of directors, served in a similar committee capacity last year.

The function of the committee, of which A. J. Ball, foreign freight traffic manager of the Pennsylvania, is also a member, is to recommend chamber policy on international shipping and air transport.

Registration of Lobbyists

The July 26 issue of the Congressional Record lists registrations received during the second quarter of 1948 by the clerk of the House of Representatives and the secretary of the Senate under the provisions of the Regulation of Lobbying Act enacted in 1946. The list includes the following:

Bromsen, Archibald; the Railroad Pension Conference, New Haven, Conn.
 Carter, C. B.; the Railroad Pension Conference.
 Crawford, W. A.; Railroad Association of Georgia, Atlanta, Ga.
 Damon, E. J.; St. Louis-San Francisco.
 Hale, John; Chicago, Burlington & Quincy.
 Hynes, W. J.; Union Pacific.

Effective Date of T. & P. Motor Order Extended to September 20

The Interstate Commerce Commission has further extended from July 20 to September 20 the effective date of its order wherein, as noted in *Railway Age* of February 21, page 62, certificates held by the Texas & Pacific Motor Transport Company, subsidiary of the Texas & Pacific, were so modified that each includes five conditions which the commission has been imposing to insure that highway freight operations of railroads remain auxiliary to rail service.

Substations for Long Island Electrified Lines

Construction has started on the Long Island's seventh postwar electrical substation at Nassau boulevard, Garden City, N. Y., as part of its \$17,656,000 improvement program promised in connection with the Public Service Commission's authorization to increase fares. The additional electrical capacity which this and other new substations are designed to provide will better enable the

railroad to meet peak demands for power during rush hours, thus resulting in increased speed of operation and improved train lighting.

The substation will be a one-story building of functional design, constructed of red face brick and reinforced concrete. It is expected to be placed in operation November 15 and will cost about \$289,000.

Four new electrical substations have gone into operation, two others are under construction, and eight more will be built. One present substation has been modernized and four others will be improved. The cost of the entire substation program is estimated at \$5,000,000.

Chamber of Commerce Head Urges Sawyer to Press Barge Disposal

Earl O. Shreve, president of the Chamber of Commerce of the United States, has urged Secretary of Commerce Sawyer to continue efforts to dispose of the government-owned Federal Barge Lines. He expressed the chamber's opposition to a rehabilitation program for the F. B. L., now being drafted by the Inland Waterways Corporation, as reported in *Railway Age* of July 31, page 47.

In a letter to Secretary Sawyer, Mr. Shreve declared that the F. B. L. represented "unfair and uneconomic competition" with privately operated barge lines and other competing forms of transportation. He added that the chamber has on several occasions within the last year appealed to congressional committees to dispose of the F. B. L. and that, pending such disposal, no funds should be appropriated or applied for its expansion, modernization or recapitalization.

"I have unwavering confidence in the ability of private barge line operators to do the job," Mr. Shreve said. "At the same time that the government barge lines are expressing concern about their dwindling resources and are curtailing operations, reports from private barge line operators show a great increase in equipment investment. They have placed in service 15 new towboats costing over \$300,000 each during the first six months of this year and 25 more are expected before the year's end. Numerous barges are also being constructed as steel is made available.

"At this time, when every possible economy in our government must be practiced, it would be foolhardy to continue to pour public funds into an agency which competes with private industry and without the payment of taxes and interest has lost over \$4,500,000 in the last two years."

Emergency Board Report

An emergency board which President Truman created on June 23 to investigate a wage and rules dispute between the Grand Trunk Western, Chesapeake & Ohio, Wabash and Ann Arbor and employees in their Lake Michigan ferry service who are represented by

Bridgeport INNER-SEAL WEATHER STRIPPING

A PROVEN PERFORMER ON THESE APPLICATIONS

END DOORS ON PASSENGER CARS—

Innerseal weatherstripping is standard equipment on many of the most modern deluxe passenger cars. It provides the airtight end door sealing that aids in maintaining optimum interior conditions and materially reduces the load on the air conditioning system.

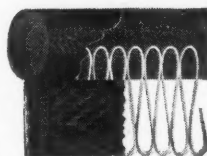
ACCESS DOORS ON REFRIGERATOR CARS—

Innerseal weatherstripped doors remain sealed completely, even when exposed to temperatures as low as 110° below zero. Perishables are safeguarded, evaporation losses are reduced to minimum.

DOORS AND HATCHES ON LOCOMOTIVES—

Innerseal weatherstripping positively protects main motors and vital allied equipment of many makes of locomotives and switching engines by sealing out abrasive dust and corrosive dampness. In addition, it provides greater crew comfort by excluding much outside noise.

Inner-Seal is made in many standard sizes and colors or may be modified especially for your requirements. Write today for samples and data sheet giving complete information.



Tough spring steel wire
molded for life into live
sponge rubber

Bridgeport FABRICS, INC.

BRIDGEPORT 1, CONN.

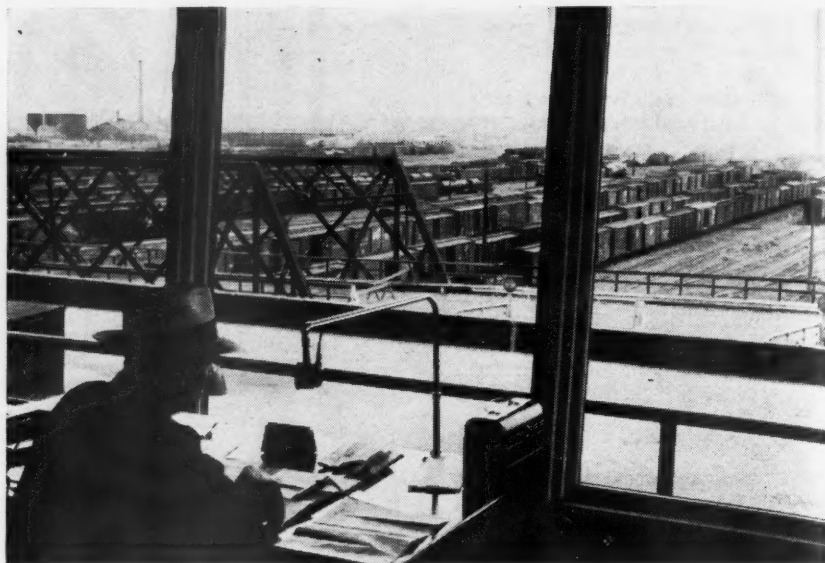
Est. 1837

the National Maritime Union has advised the White House that the differences between the parties have been satisfactorily settled and that the emergency which compelled the creation of the board no longer exists. According to the board, agreements settling the dispute were signed by the carriers and their employees represented by the N.M.U. at Detroit, Mich., on July 20.

American University Will Conduct Institute of Traffic Management

An Institute of Industrial Transportation and Traffic Management will be conducted by the American University, Washington, D. C., from November 2 through November 23. Like the rail, air, and foreign transportation institutes, which the university has been conducting in recent years, the new course will be under the direction of Dr. L. M. Homberger, professor of transportation at the university.

The announcement stated that it has been organized with Executive Secretary E. M. Lacey of the National Industrial Traffic League acting as consultant. The program of studies will include such subjects as the use of the various modes of transportation; the freight forwarding business; new developments in traffic with emphasis on rate-making; handling of freight; small shipments; transportation factors related to marketing efficiency; car service; government and military traffic re-



G.Y.M. SIXTY FEET UP—The Chicago & North Western has constructed a general yardmaster's office atop the ice house at Proviso (Ill.) yard at an elevation of 60 ft. above the track. The office is glass-enclosed and provides an unobstructed view over 260 mi. of yard trackage. A two-way communication system provides contact to all principal points in the yard. Construction of the tower cost approximately \$40,000. Plans call for subsequent installation of a pneumatic tube system and two-way radio

quirements; and "the traffic manager and his work." Consideration will also be given to "the present problems of the transportation industry and the outlook for the future."

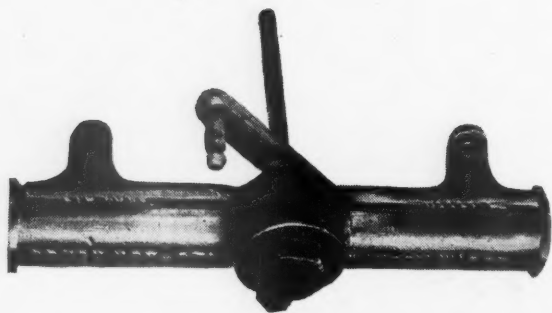
The institute's faculty will be com-

posed of industrial traffic managers and representatives of transportation organizations and government agencies, including Arthur H. Gass, chairman, Car Service Division, Association of American Railroads; Giles Morrow, executive secretary and general counsel, Freight Forwarders Institute; Ford K. Edwards, director, Bureau of Accounts and Cost Finding, Interstate Commerce Commission; William E. Hayghe, chief, Central Service Division, Bureau of Federal Supply, Treasury Department; Colonel E. C. R. Lasher, transportation adviser, Office of Civil Defense Planning, Office of Secretary of Defense.

Field trips to transportation facilities and attendance at hearings of regulatory agencies will supplement the classroom work. Also, there will be evening meetings with addresses as follows: Traffic Management and Its Position in American Transportation, by E. A. Jack, general traffic manager, Aluminum Company of America; Carrier and Shipper Organizations, by Executive Secretary Lacey of the N.I.T. League; and Transportation in the Postwar Period, by Interstate Commerce Commissioner Walter M. W. Splawn.

The university's announcement stated that students for the institute may be selected by their employers, and that others may apply by submitting information about their educational background or business experience. No specific previous education is required, and there is no age limit. The tuition will be \$80, and veterans may participate under Public Law 346, the so-called G. I. bill of rights. Applications should be sent to Dr. L. M. Homberger, the American University, School of Social Sciences and Public Affairs, 1901 F street, N. W., Washington 6, D. C.; the last registration day will be October 27.

Retired... after 20 years of dependable service this forerunner of the now famous **AIR-PUSH** line was retired



... and taking its place, another Sprague wiper will continue to give even better service. The quality, dependability and power of Air-Push has placed it before the eyes of the industry as a standard.

SOLVE YOUR OWN WINDSHIELD WIPING PROBLEMS by writing today for our **FREE** illustrated catalog.

Sprague **DEVICES, INC.**

Manufacturer of AIR-PUSH Windshield Wiper
MICHIGAN CITY, INDIANA

**Convenient,
comfortable**

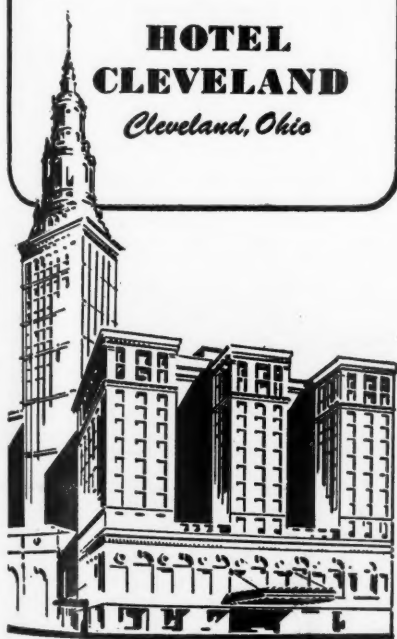
*Hotel
Cleveland*

WHEN convenience counts and comfort is important you'll appreciate the central location, the friendly hospitality, the cheerful, modern rooms of Hotel Cleveland.

Hotel Cleveland is at the very heart of Cleveland, convenient to Public Auditorium, Stadium, stores, office buildings. Union Passenger Terminal, Terminal office buildings, and garage are all connected to Hotel Cleveland by covered passage.

★ **Write for reservations.**
Best choice of rooms
Thursday through Monday.

**HOTEL
CLEVELAND**
Cleveland, Ohio



Current Publications

BOOK

The World's Railways and How They Work. 320 pages, illustrations. Published by Odhams Press Limited, 24 Henrietta st., London, W.C.2, England. Price 8 shillings, 6 pence.

After an introductory chapter on triumphs of railway engineering, there follow chapters on locomotive development, railway operation and signaling in Great Britain, underground railways of the world, the fastest train in Europe, railways of the Alps, Scandinavia, Near and Far East, India, Africa, Australia, United States, Canada and Central and South America. There are numerous illustrations, many of which are of the cutaway type with parts and sections indicated by name.

PAMPHLETS

The Alaska Railroad. 8 pages, illustrations. Published by *The Forty-Ninth Star*, Anchorage, Alaska.

Representing 25 years of progress, this "Golden Spike" of *The Forty-Ninth Star* (formerly Anchorage Weekly Times), dated July 15, 1948, reviews the history and construction of the Alaska Railroad and outlines the rehabilitation program now under way.

Wisconsin's Railroads; Their Part in the Development of the States. 24 pages. Compiled by the Association of American Railroads, Transportation Building, Washington 6, D. C. Free.

The building of Wisconsin's early railroads, its first locomotives, and the men who did the building are discussed briefly in this pamphlet. A second section lists important dates in Wisconsin railway history from 1836 to 1900; developments since 1900; brief biographies of the men who were prominently identified with early railway developments in the state; current mileage statistics on the railways in the state; historical, biographical and descriptive works containing material on Wisconsin railroads; and an address list of its railroads.

Southern Pacific Transportation System; An Eight Year Record of Accomplishment, 1940-47. 6 pages. Issued by Mackubin, Legg & Co., Baltimore 3, Md.

With the purpose of trying to bring out the improved status of the securities of our railroad systems, this survey attempts to present what has been accomplished by the Southern Pacific during the last eight years. It includes statistics pertaining to capitalization, financial return, and operations, and the accompanying text interprets these statistics and outlines briefly industrial activities in the area served by the Southern Pacific. Comparative statistics showing times fixed charges were earned, earnings of common stock, price range, 1947 dividends, rate of return, etc., for the Southern Pacific, Atchison, Topeka & Santa Fe and Union Pacific are also included.

**LONGER LIFE
for**

Rolling Stock



with one coat of

MORTEX No. 4

Here's the tested, tough protective coating far superior to paints and cut-back asphalt products that gives a rich, dull black finish.

Applied with brush, trowel or spray. It's the most practical, low-cost rust preventative for roofs, interiors, and underframes of steel freight and refrigerator cars, covered hopper cars used for soda ash, lime and similar products, ice bunkers and equipment exposed to acid fumes and gases. Just the thing for steel bridges, cooling system ducts and sumps, outside storage tanks, tool houses and bins.

- Protects against rain and moisture
- Protects against salt brine
- Protects against acid and alkali fumes
- It's odorless
- It's non-toxic
- It's vermin-proof

Mortex No. 4 adheres to any clean, dry surface. Will not run, sag, blister or craze at temperatures up to 250° F.

TRY IT YOURSELF!

While most railroads get Mortex No. 4 in the 55-gallon drums, you can order a one or five-gallon test can with easy directions. Put it through your own comparison tests.



Write for literature

J. W. MORTELL CO.

Technical Coatings since 1895

563 Burch St.,

Kankakee, Ill.



The Governor of Kansas *invites You*



STATE OF KANSAS
OFFICE OF THE GOVERNOR
TOPEKA

FRANK CARLSON
GOVERNOR

To American Industry:

Kansas has matchless and abundant resources which await only the magic touch of industry to spread their benefits to the world. Its rich soil produces the essential foodstuffs of life. Beneath the surface is stored in abundance cheap energy to turn the wheels of industry. The possibilities of rich reward are limitless.

The facilities of the State, including the active and aggressive Industrial Development Commission, are pledged to offer every encouragement and assistance in working out the problems of new industries seeking to process and distribute the great natural resources of Kansas, which furnish fertile and almost virgin soil for aggressive modern development. A thorough investigation is always welcomed. Modern transportation permits products of Kansas industry to radiate cheaply to all parts of the country.

Sincerely,

Frank Carlson
Governor



Frank Carlson

* One of a series of advertisements based on industrial opportunities in the states served by Union Pacific Railroad.

Unite with Union Pacific in selecting sites and seeking new markets in California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, Oregon, Utah, Washington, Wyoming.

*Address Industrial Department, Union Pacific Railroad
Omaha 2, Nebraska

UNION PACIFIC RAILROAD

Road of the Daily Streamliners